CONSTRUCTION NEWS

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RAILWAYS.

(denotes that this work is advertised in Engineering News.)*

ARANSAS TERMINAL RY.—Grading has been started on this line, which is to be constructed from Aransas Pass, Texas, southeasterly along the channel of the Aransas Pass Channel & Dock Co. to deepwater on the east side of Harbor Island, where docks and warehouses will be built. From the shore at Aransas Pass the line will pass over a solid fill, 9,000 ft. long, crossing Red Fish Bay, thence across Steadman Island, about 700 ft., and will then cross the old Corpus Christi channel on a 500-ft. trestle, with a drawbridge, to have an opening of 40 ft. at the center of the channel, thence crossing an arm of Corpus Christi Bay over a fill to be about 1.5 miles long, continuing on Harbor Island to the east side of the island. The Aransas Pass Channel & Dock Co. will erect wharves and warehouses, also a grain elevator, a cotton compress and coal docks. E. O. Burton is Pres., Gibbs Bldg., San Antonio, Tex.; C. S. Corrigan is Ch. Engr., Box 183, Aransas Pass, Tex. Noted officially on April 21.

CANADIAN PACIFIC.—The TORONTO CONSTRUCTION CO., 14 Wellington St., East, Toronto, Ont., has been awarded the contract for the construction of the line which the Canadian Pacific will build from Coldwater to Atherly Junction, to give direct connection with Orilla, Ont. Estimated cost, $500,000. This line was ordered by the Ontario Railway and Municipal Board, and will be used by the Canadian Northern, as well as the C. P. R.

The Canadian Pacific Ry. Co. has filed at the City Registry office, Ottawa, Ont., plans involving an outlay of about $1,000,000 for an underground line through the city connecting the Central Station near the foot of the Rideau Canal with the company's central station near the foot of Union Station in the northwestern end of the city. The connection between the two stations is now made by a roundabout line across the Ottawa River and around the outskirts of Hull. The proposed new line will give the shortest route between the two stations, will enable all trains to be run through to the Central Station in the heart of the city, and will cut off several miles of the company's through line from Montreal to the West. J. G. Sullivan is Asst. Ch. Engr., Montreal, Que.; A. M. Jones is Resident Engr., Ottawa.

CHICAGO, BURLINGTON & QUINCY.—The budget of expenditure for the Burlington R. R. System for the current year, which has just received the approval of the Board of Directors, calls for the use of $30,000,000. Of this amount $10,000,000, approximately, is to go for new equipment and power; an equal sum will be expended for new lines and for double tracking and the remainder will be used for miscellaneous improvements. The new construction to be undertaken includes nearly 200 miles of road to close some of the gaps between the new route which this company will built from Denver to the Puget Sound country in connection with the Colorado & Southern R. R.

The management of the Burlington System also has decided to bring its trains from the Northwest into Denver on its own tracks and into its own terminals instead of over the tracks of the Union Pacific and into its terminals. Some of the equipment already has been ordered, including 2,500 box cars. Some of the equipment and power which are soon to be ordered include 1,000 steel gondola cars, 2,000 box cars, 50 coaches, 50 locomotives, 27 switch engines, 500 automobile cars, 500 ballast cars, 25 baggage cars, 10 baggage and mail cars and 10 chair cars.

The longest stretch of new road to be built is between Kirby and Powder River, Wyo., 104 miles. This line will connect the Big Horn Basin line of the Burlington with the tracks of the Chicago & Northwestern Ry., over which the trains will run between the connecting point and Orin Junction, where they will reach the tracks of the Colorado & Southern. This work is estimated to cost $6,000,000. About 53 miles of track are to be built from Scribner to Laurel, Mont., a station on the Northern Pacific just west of Billings. From Greeley on the main line of the Burlington east of Denver, to Hudson, 25 miles north, a new line is to be built. In Illinois a new line is to be built from Herrin to Metropolis, 38 miles, in order to take the line to the Mississippi River, at a point where connection can be made with the Louisville & Nashville. In Illinois 75 miles of double track work are to be built, to cost about $1,700,000. The double tracking is to be between Savanna and Galena Junction, between Salida and Bushnell, East Dubuque and Rutledge, Stoddard and South Junction and between Grand Crossing and Lytle. Among the miscellaneous improvements will be track elevation work in Chicago to cost about $750,000. It is stated that fully $1,000,000 will be expended in erecting new machine shops at Havelock, Neb. Noted on Nov. 25, 1909. W. L. Breckenridge is Engr. M. W., Chicago; F. T. Darrow is Engr. M. W., Lincoln, Neb.

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—This company has applied to the State Railroad Commission for authority to build a line into Superior, Wis., and through that city to its ore docks on St. Louis Bay. Including the ore docks and other facilities in that connection the 6.38 mile extension is estimated to cost $780,000. The Commission will hear the application on June 6.

CHOCTAW, NEWCASTLE & WESTERN.—An extension probably will be built at once from Alderson, Okla., to Savannah, Okla. This railroad is now operated for freight traffic between Alderson and Cambria, three miles. J. E. LeBosquet is Vice-Pres., McAlester, Okla.

CROSBYTON & SOUTH PLAINS.—Chartered in Texas to build a 120-mile line from Spur in Dickens County, to Lubbock, in Lubbock County, and a branch line from Crosbyton, Crosby County, to Plainview, in Hale County. Headquarters, Crosbyton, Crosby County, Tex. Capital stock, $150,000. Incorporators: Julian M. Bassett, Roger M. Bassett, William D. Petzel and J. C. Johnson, Crosbyton; Avery Coonley and Howard Coonley, Riverside, Ill.; C. L. Spencer, P. W. Coonley, John Stewart Coonley and Edward P. Bailey, of Chicago.

HOUSTON & TEXAS CENTRAL.—The State Railroad Commission, Austin, Tex., has received from the Houston & Texas Central Ry. Co. a supplemental application following its application of March 24 asking for permission to issue $3,000,000 in bonds on the Mexia-Nelleva cutoff. The supplemental application sets forth that it will take about $500,000 to complete the road in the way of ballast, additional tracks, relaying 57.17 miles of 61½-lb. rail with 75-lb. rail, and for the proposed terminal buildings and tracks at North Zulch. The railroad company wishes the commission to take these improvements into consideration in placing its value upon the new line, and for this reason submitted with the supplemental application a number of estimates of the cost of the work and the plans for the same. Among the items it asks the Commission to take cognizance of are: Ballasting, relaying 57.17 miles of 61½-lb. rails with 75-lb. rails, terminal buildings, etc. North Zulch, additional tracks, North Zulch with one or two more little items, totaling $484,393. On May 9, R. D. Parker, Engr. for the Railroad Commission, submitted a report placing the valuation of the Mexica-Nelleva cutoff at $2,383,000 first mortgage 30's at 6%. The application for the issuance of an additional $484,393 was also approved, said amount to be used for the completion of the road, the bonds to be issued as the improvements call for. I. A. Cottingham is Engr., Houston, Tex.

IRWINTON RY.—Bids will be received until 2 p. m., on May 20, for grading and track laying on 3½ miles of line from McIntyre to Irwinton, Ga. George H. Carswell is Secy., at Irwinton, Ga.

MOOREFIELD & VIRGINIA.—This recently incorporated company has elected officers as follows: W. B. Cornwell, Pres., Romney, W. Va.; C. B. Welton, Vice-Pres., Moorefield, W. Va.; Eugene E. Alles, Secy. and Treas., Romney; William Trapnell, Gen. Mgr. and Ch. Engr., Romney. Company proposes to build a railway from Moorefield, W. Va., to Palo Alto, Va., as noted on April 14.

NEWTON NORTHWESTERN. — Incorporated in Mississippi to build 40 miles of line from Newton to Carthage, Miss., via Conehatta, Sebastopol and Walnut Grove, including three bridges, two of 200 ft. each and one of 1,500 ft. D. L. Ragland is Pres. and Ch. Engr.; W. A. Brown, Gen. Mgr.; W. V. Fant, Secy. and Treas., all of Newton, Miss.

NORTHERN PACIFIC. — Right-of-way is now being secured for the proposed Carington-Turtle Lake extension in North Dakota. W. L. Darling is Ch. Engr., St. Paul, Minn.

PARIS & MOUNT PLEASANT.—We are officially advised that contract for grading work has been let to M. TAUSEY. Twenty-five miles of grading have been completed. Contract for track-laying and bridge work let to D. J. GRIGSBY, Dallas, Tex. It is planned to have the first section of 25 miles in operation by Sept. 1. This railroad will run from Paris to Mount Pleasant, Tex., via Pattonville, Deport and Bogota, 53 miles. Right-of-way and capital are secured and surveys made. R. F. Scott is Pres., and H. P. Mobberly is Ch. Engr., Paris, Tex. Noted on April 7.

PHILADELPHIA & READING.—We are officially informed that this company has arranged to install Hall signals of the disc type between Reading and Allentown, Pa., on what is known as the East Penn Branch, a distance of 35.3 miles. The installation covers 61 home and 61 distant signals. Plans are prepared by the railway company and the installation is being made by the railway company. No contracts will be awarded. In connection with this work the company is also arranging to renew entirely the existing telegraph lines. A. T. Dice, Reading, is Gen. Mgr.

SIOUX FALLS & WESTERN.—We are officially advised that contracts will be let soon for building this railway from Sioux Falls to Wheeler, S. Dak., about 125 miles in length. Capital is secured and survey completed. Right-of-way has not been secured yet. R. F. Brown is Pres., and J. L. Wagner is Ch. Engr., both at Sioux Falls, S. Dak. Noted on April 12.

SOUTH CAROLINA WESTERN.—Incorporated to build a 40-mile railway from McBee to Florence. W. R. Bonsal, Hamlet, N. C., is Pres. Mr. Bonsal is Pres. of the North & South Carolina Ry., which is in operation between Hamlet and Dillon, N. C., 39 miles.

STEPHENVILLE, NORTH & SOUTH TEXAS.—A stockholders' meeting will be held on July 2 to act on the following proposed extensions: Hamilton to Gatesville, Tex., 32 miles; Stephenville to Thurber, Tex., 26 miles; a branch from a point near Hamilton to Comanche, Tex., about 35 miles. B. C. Cage is Pres. and W. S. Watson, Secy. and Treas., both of Stephenville, Tex. This railroad now runs from Stephenville to Hamilton, 43 miles.

TENNESSEE, ALABAMA & KENTUCKY.—This railway will be built from Chattanooga, Tenn., direct to Louisville, Ky., through or near Dunlap, Spencer, Sparta, Cookeville, Gainesboro, Tompkinsville, Edmonton and Hodgenville, about 230 miles in length. Location survey is in progress between the Cumberland River at Gainesboro and the Van Buren County coal fields, about 60 miles, which will be the first section built. Rutledge Smith, Cookeville, Tenn., is Pres. and Gen. Mgr.; J. N. Cox, Vice-Pres.; R. L. Farley, Treas.; O. K. Holladay, Secy., and R. J. Moscrip, Ch. Engr., Cookeville, Tenn.

TEXAS.—A bonus of nearly $50,000 has been raised by the citizens of Anson, Jones County, Tex., to induce a railroad to come to that city. It is hoped to get the railroad that is to be built from Abilene to Hamlin to come either directly to the city or go within a few miles west of Anson. More money will be raised for station grounds and right-of-way.

TEXAS NORTH & SOUTH.—Incorporated in Texas, with $360,000 capital, to build from Seymour, via Coleman, to San Antonio, Tex., 360 miles. The directors are: L. E. Collins, Pres.; C. F. Dumas, Treas.; W. N. Cameron, Vice-Pres.; W. H. Stephens, Secy.; W. J. Coulson, J. C. Dibrell, J. E. Boog Scott and J. A. B. Miller, all of Coleman, Tex.

WESTERN MARYLAND.—This company is reported to have concluded a deal with the Baltimore Fidelity Warehouse Co. for the purchase of the latter's wharves, warehouses and other property at Lazaretto Point and at the foot of York St., Baltimore. The purchase price is $500,000 and, in addition the Western Maryland Co. will spend $250,000 improving the properties, and Brown's Wharf, which it owns also. The property acquired comprises seven acres at Lazaretto Point.

HONDURAS.—Drew Linard, U. S. Consul at Ceiba, Honduras, states that a concession granted by the Government of Honduras early in 1909 for constructing a railroad from Iriona, the Atlantic terminal to the inland city of Juticalpa, and embracing the concessionary option of extending lines to Tegucigalpa and the Pacific port of Amapala, has been financed in Chicago, with a capital of $5,000,000, and incorporated under the laws of the State of Delaware as the North & South Interoceanic R. R. Co. Engineers have completed the location survey to Juticalpa, the first objective point, 144 miles, and grading for a standard-gage road was begun in October, 1909. The work involved is of considerable magnitude, as it is intended to jetty the mouth of the Gualaya River, upon which Iriona is situated, and deepen the channel to a depth sufficient to enter vessels drawing 30 ft.; to lay out a town site with proper drainage, install water and electric-light plants, and erect a wireless station.

Quoting an authentic source: "The work is to be pushed with vigor and completed as rapidly as men, money and machinery can accomplish it, and new constructing and operating material, including dredge, pile driver, sawmill, tugboat, rails, engines, cars, etc., will be delivered at Iriona in May, 1910." The road, when completed, will pass through the hardwood, agricultural and mining districts of that region and, aided by intended colonization, will develop the natural resources and open to American commerce a practically virgin territory. [The names of the officers of the company are on file in the Bureau of Manufactures, Dept. of Commerce and Labor, Washington, D. C.]

ELECTRIC RAILWAYS.

BAYONNE, N. J.—The Bayonne Subway & Developing Co. has been organized to build a subway from Bayonne, N. J., to Port Richmond, Staten Island, N. Y., where it is to connect with the Hudson & Manhattan R. R. Co. and with existing lines on Staten Island. Capital stock, $100,000. Wm. S. Van Clief is Chn.; Frank Fogin, Secy., and Edward Doyle, Treas. Among the directors are: Frederick Cozzens, A. L. Burbank, George P. Egbert and Geo. H. Treadwell.

HERSHEY, PA.—The Governor has approved the action of the directors of the Hummelstown & Campbelltown Street Ry. Co. for an extension of its lines of several miles, in Derry Township and in parts of Lebanon County. H. N. Herr is Ch. Engr., Lancaster.

SCRANTON, PA.—The Scranton & Lake Ariel Ry. Co. will apply for a charter in Pennsylvania on May 23 to build an electric railway between Scranton and Lake Ariel. Incorporators: John J. Brown, Valentine Bliss, W. J. Davis, John J. Holland, F. W. Wollerton, E. J. Lynett and A. G. Rutherford. Noted on July 1, '09.

GROVE CITY, PA.—Contract for the construction of the Grove City & Slippery Rock St. Ry. Co.'s proposed line between this city and Slippery Rock, Pa., a distance of about seven miles, has been awarded to ALFRED DeMAYO & CO., of New York, at $173,000, or about $25,000 per mile. This contract includes the excavating, grading, laying of rails and ties, furnishing rails and ties, but does not include the construction of bridges nor viaducts, or any of the ballasting along the line. Contracts for the bridges and ballasting will be awarded separately. The contract just awarded specifies that the work must be started by May 22, and completed four months later. It will be a single track line with a "Y" at each terminal, and two 400-ft. sidings will be constructed. The rails will be 70-lb. T rails, excepting on paved streets, where 7-in. girder rails will be laid. The contract for the car barns, shops, etc., has not been awarded, but will be let within a few weeks. The company will use gasoline motor cars, the estimated cost of which will be about $25,000 each. Contracts for these have not been placed. Combination baggage and passenger cars will be used, and regulation freight cars will be placed in operation after passenger service is established. John P. Barr is Pres. S. L. McClure is Gen. Mgr., Grove City. Noted on April 14.

WASHINGTON, D. C.—A bill to incorporate the East Washington Suburban Ry. Co. and to grant it a franchise to operate in the southeast suburbs has been introduced in the Senate by Senator Fletcher. Albert Carey, O. A. Emmons, John Kuhn, Maurice Oterback, Robert Bradberry and George E. Emmons, of Washington, D. C.; Samuel E. Cox, William A. Harrison and A. W. Thomas, of Maryland; Reese Carpenter, of New York; R. H. Phillips and J. S. Sims, of Virginia are named as the incorporators. The bill proposes to give the company authority to operate a single or double track street railway for passengers and small freight by the following route: Beginning near the intersection of Nichols Ave. and Good Hope Road, thence along or near Suitland Road, thence along the District line. The use of overhead wires is granted, but two wires must be used by each track. The construction work must be begun within one year and completed within two years. The bill prescribes that free transfers shall be issued between this line and the Anacostia & Potomac River Ry. Co., in accordance with agreements determined upon by the District Supreme Court. It is also specified that cars shall be run "as often as public convenience may require in accordance with time table to be subject to the approval of the District Commissioners." The company is to pay an annual tax of 4% on its gross earnings. Noted on March 17.

WHEELING, W. VA.—The Wheeling Traction Co. is reported to have awarded a contract for building an extension, including the driving of a tunnel, to the FEDERAL ENGINEERING CO., Pittsburg, Pa.

FAIRMONT, W. VA.—The annual meetings of the Fairmont & Clarksburg Traction Co. and the Fairmont & Northern Traction Co., which are controlled by the interests owning the Consolidation Coal Co., were held on May 11. The board elected by the Fairmont & Clarksburg Co. is composed of Clarence W. Watson, of Baltimore and Fairmont; S. L. Watson, A. Brooks Fleming, J. E. Watson, George T. Watson, Walton Miller and J. O. Watson, of Fairmont; S. C. Denham, Clarksburg, W. Va.; Jere H. Wheelwright and Van Lear Black, of Baltimore, and A. M. Young, New York. S. L. Watson was elected Pres.; Clarence W. Watson, Vice-Pres.; Walton Miller, Secy. and Treas., and James O. Watson, Gen. Mgr.

The Fairmont & Northern Traction Co. is constructing the line between Bellview and Amos. Its directors are A. B. Fleming, A. L. Watson, C. L. Shaver, George T. Watson, James O. Watson, all of Fairmont, S. L. Watson was elected Pres.; A. B. Fleming, Vice-Pres., and James O. Watson, Gen. Mgr. The Fairmont & Clarksburg Traction Co. has ordered a portable sub-station. The company has also ordered a large amount of paving bricks, to be laid between the tracks of the company in Fairmont. Noted on March 31.

COVINGTON, KY.—The Covington, Big Bone & Carrollton R. R. Co. has been granted a 50-year franchise by the Aldermen and Council to build a railway in Covington. Noted on March 31.

NELSONVILLE, OHIO.—The Hocking-Sunday Creek Traction Co. will let contracts for construction of its line from Nelsonville to Athens and Logan. Surveys have been completed between Nelsonville and Athens and are now being made in upper Sunday Creek and on Sugar Creek. This company has taken over all the rights and property of the Hocking-Sunday Creek Traction Co., of Nelsonville. Charles Tutt is Gen. Mgr.; W. H. Badger is Ch. Engr., Nelsonville.

VINCENNES, IND.—The Vincennes, Washington & Eastern Traction Co. has been incorporated in Indiana to build an electric railway from Vincennes to Loogootee. Capital stock, $100,000. Incorporators: Joseph L. Ebner, of Vincennes; Elmer J. Binford,

of Greenfield; John B. Seal, of Loogootee; Austin F. Cabel, S. C. Eskridge and A. J. Padgett, of Washington.

MINOOKA, ILL.—The Chicago, Ottawa & Peoria Ry. Co., of La Salle, has been granted a franchise by the Council to build a railway in Minooka. This is part of the plan to build a 22-mile extension from Morris to Joliet, it is stated. H. E. Chubbuck is Gen. Mgr., Peoria, Ill.

MARION, ILL.—The Marion R. R. Co. has been incorporated for the purpose of building an electric railway from Marion to Johnson City. Incorporators: A. E. Harper, William D. Haynie, 115 Adams St., E. J. Hughes, L. D. Doty, 6030 Kimbark Ave., and C. A. Brickett, all of Chicago.

SIOUX CITY, IOWA.—We are officially advised that the Sioux City & Eastern Traction Co. has been organized in Sioux City to build an interurban railway from Sioux City through Climbing Hill and other towns to Denison, Iowa. Articles of incorporation were filed several weeks ago. Capital stock, $100,000. Officers are as follows: A. H. Tennis, Sioux City, Pres.; W. B. Goodrich, Climbing Hill, Vice-Pres.; H. C. Fedderson, Luton, Treas.; W. L. Harding, Sioux City, Secy.; C. S. Malcom, W. H. Steinhauer and Wm. Hanner, of Climbing Hill. Walter H. Foss, of Minneapolis, has been elected Superintendent in charge of right-of-way, stock selling and general promotion of the road.

CEDAR RAPIDS, IOWA.—William Dows and Isaac Smith have been granted an electric railway franchise in Cedar Rapids.

LOGAN, IOWA.—The Commercial Club is interested in a proposition to build an electric railway between Logan and Magnolia. W. H. Johnson is Pres. of the Commercial Club and F. D. Stevens is Secy.

SHERIDAN, WYO.—Albert Emanuel and William Sullivan, of Dayton, Ohio, have been granted a franchise by the City Council to build a railway in Sheridan.

JEFFERSON CITY, MO.—The North Missouri Central Ry. Co. has filed with the Secretary of the State, Jefferson City, notice of increase of its capital stock from $600,000 to $2,500,000. The company was organized last January and proposes to construct an interurban line between Jefferson City, Columbia, Mexico, Cedar City and Ashland, about 60 miles in length. Recently the Jefferson City Bridge and Transit Co. was purchased and this property probably will represent a part of the increased stock. It is intended to cross the Missouri River over this bridge. O. F. Spaete and A. J. Estes, of Columbia, are Pres. and Secy., respectively.

ROGERS, ARK.—The City Council has granted to the Rogers-Bentonville-Decatur Interurban R. R. Co. a 50-year franchise for right-of-way upon the principal streets of Rogers and the actual work of constructing this line will begin at an early date. Rogers subscribed $30,000, Bentonville $50,000 and Decatur $20,000. J. D. Houseman and G. G. Southerland, of St. Louis, are named as the promoters of the road.

VAN BUREN, ARK.—The Fort Smith, Van Buren & Interurban Light & Traction Co., it is announced, will receive bids soon for the construction of its proposed 6-mile railway from Fort Smith to Van Buren. W. D. Pratt is Pres.; Harry T. Daily, Secy. and Treas.

MUSKOGEE, OKLA.—We are officially advised that the Eastern Oklahoma Traction Co. has opened negotiations for financing this project. The lines to be constructed first are from Muskogee to Tulsa, Wagoner and Sapulpa, 71 miles in length. H. B. Spaulding is Pres., Muskogee. Fully noted on March 10.

The Muskogee Transit Co., capital $100,000, has been chartered to build an interurban railway from Muskogee to Wagoner, Corrtea, Coweta, Broken Arrow, Tulsa, Sapulpa, Haskell, Boynton, Okmulgee, Checotah, Warner, Webbers Falls, Illinois Station, Braggs, Fort Gibson, Henryetta and intervening towns, 225 miles. The directors are E. W. Mangson and Oliver J. Barwick, of St. Louis; O. D. Revell, of Asheville, N. C.; Tams Bixby, Charles W. Bliss, M. R. Williams, Thomas P. Smith, M. M. Bragdon, N. F. Hancock, W. N. Sayer and George A. Murphy, of Muskogee, Okla.

GOLDEN, COLO.—Rees C. Vidler has been granted a franchise to build a railway from Golden to the foot of Lookout Mountain, from which point a cable line is to be built to the summit.

SEATTLE, WASH.—The Seattle, Snohomish & Everett Ry. Co. has been granted a 25-year franchise to build an electric railway in Snohomish. Charles W. Kimball, Seattle, is Secy. and Treas. As noted on Aug. 12, '09, this company plans to construct an overhead electric railway to connect Seattle, Bothell, Snohomish and Everett, a distance of about 32 miles. Capital stock, authorized and issued, $500,000. Headquarters, 443 New York Block, Seattle. Clyde C. Chittenden is Pres.; Joseph R. McLaughlin, Vice-Pres.

WALLA WALLA, WASH.—The Walla Walla Valley Ry. Co., of Portland, has been incorporated in Washington to build a street railway system in Walla Walla, and also a line from Walla Walla to Milton, Ore. Capital, $500,000. The incorporators are L. A. McArthur, R. D. Frier and H. D. Hanna, of Portland, Ore.

ALBANY, ORE.—The Albany Interurban Ry. Co. has surveys in progress from Albany to Sweet Home via Lebanon and South Santiam Valley. Right-of-way is being secured. This proposed line will connect Albany, Sweet Home, Lebanon, Brownsville and Holley, as noted on Feb. 24. The incorporators are P. A. Young, C. E. Sax and J. F. Hawkins, of Albany.

SAN RAFAEL, CAL.—W. L. Courtright has applied to the City Trustees for a franchise to operate a street electric railroad through the streets of San Rafael.

LIGHT AND POWER PLANTS.

(denotes that this work is advertised in Engineering News.)*

OLD TOWN, ME.—We are officially advised that the city has appointed a special committee to inquire into the feasibility of establishing a municipal electric lighting plant. Address William H. Waterhouse, McLeod Bldg., Old Town.

CONCORD, N. H.—The CONCORD ELECTRIC CO. has been awarded contract for lighting the New Hampshire state prison with electricity.

BOSTON, MASS.—Bids were opened on April 30 at the Bureau Yards and Docks, Navy Dept., Washington, D. C., for condenser piping and pumps, erected in the central power plant, navy yard, Boston: John W. Danforth Co., 72 Ellicott St., Buffalo, N. Y., $13,774; Walworth Mfg. Co., 132 Federal St., Boston, two bids, $16,744 and $17,497; D'Olier Engineering Co., 121 South Eleventh St., Philadelphia, Pa., $16,425.

*FORT ANDREWS (Boston post-office), MASS.—Bids, in triplicate, will be received at the office of Capt. A. M. Miller, Constructing Q. M., U. S. A., 263 Summer St., Boston, until 10 a. m., June 6, for the construction of an electric lighting system at Fort Andrews. Plans can be seen, and specifications, blank forms and full information furnished on application at the office here. Plans and specifications may also be seen at the office of the Chief Quartermaster, Dept. of the East, Governor's Island, N. Y. H.

LEXINGTON, MASS.—The Board of Gas and Electric Light Commissioners has authorized the Edison Electric Illuminating Co. to purchase the plant and holdings of the Lexington Gas & Electric Co. and to issue sufficient capital stock to pay for the same.

HAVERHILL, MASS.—The City Council is considering a proposition submitted by the National Meter Co., New York, to install an electric light plant for the city. The company offers to install a plant of sufficient size to supply electricity for 500 arc lamps of 500 watts each and 200 25-c. p. incandescent lamps, for $24,420, the equipment to include one 250-HP. Nash producer gas engine, one 150-KW. generator, one 250-HP. producer, including foundations for engine, producer and generator; all piping, switchboard, conduits and conductors from switchboard to generator and power station. The company does not include in its estimates the land necessary for the station, lamps, pole lines or connecting the pole lines to switchboard. The cost of operating the plant, including interest, depreciation, etc., is estimated at $10,450 per year, making the cost for 300 lamps $34.43 each per year. The company offers to install a duplicate plant for $48,840 which would increase the cost of the lamps to $45.76 each per year.

NEW YORK, N. Y.—Bids are asked until 11 a. m., May 31 by C. B. J. Snyder, Supt. School Bldgs., for completing and finishing the repairs, alterations and additions to the electric equipment in Public School 4, Fulton Ave. and 173d St., Boro. of the Bronx, in accordance with the original plans and specifications of contract awarded to E. J. Duggan, which has been declared abandoned.

FORT TERRY, N. Y.—Bids were opened on April 30 at the office of Capt. F. T. Arnold, Constructing Q. M., U. S. A., New London, Conn., for electric lighting system and power plant at Fort Terry. The following are the lowest bids received: Whitall Electric Co., wiring buildings, $9,819; pole line, $11,582; wattmeters, etc., $2,133; switchboard, $3,000; boilers, $8,650, and concrete building, $12,850. John W. Danforth Co.: generators, $5,070; stack, $4,400. Walworth Mfg. Co., feed water heater, $1,182; steam piping, $12,800; Ridgeway Dynamo & Engine Co.: engine, $9,100.

NIAGARA FALLS, N. Y.—Contract for the plant for the U. S. Lighting & Heating Co. has been awarded to SNYDER & GILLETT.

SOUTH SHARON, PA.—The Borough Council is considering the question of establishing a municipal electric light plant. Estimated cost, $50,000; of maintenance, $7,000 per year. The proposed plant would provide for about 100 street arc lamps and also for commercial and residential lighting. Estimated cost of the street lamps if secured from a private company, $7,500 per year.

PHILADELPHIA, PA.—The Philadelphia & Reading Ry. Co. has filed plans for approval in the Bureau of Building Inspection, for the erection of a large power-house on Pier 14, North Wharves, in Port Richmond, to be 101.10 by 99.7 ft., to provide power to operate the machinery in the coal pockets of the company at that point. William Hunter is Ch. Engr., Philadelphia.

WOODVILLE, PA.—The County has awarded contract for the construction of a new power-house for the county home to the DAWSON CONSTRUCTION CO., of Pittsburg, at $21,765.

BALTIMORE, MD.—Samuel T. Williams, 223 North Calvert St., Baltimore, Md., is in the market for two direct-current, 220-volt generators, belted; 50 to 75-KW., 125-volt, direct-connected set; one for 220 volts; also several 15-HP., 110-volt, direct-current motors, and two Corliss engines of from 75 to 125-HP. each.

ELKTON, MD.—Plans are being considered by the Elkton, Fair Hill & Oxford Electric Ry. Co. for the construction of an electric power plant.

BALTIMORE, MD.—Beginning June 1 the City Hall, Court-House and both annexes of the City Hall, No. 1, on Gay St., and No. 2, the old Central Police Station, on North St., will be lighted by the CONSOLIDATED GAS ELECTRIC LIGHT & POWER CO. at 3 cts. per KW.-hour. Contract was awarded on June 11 by the Board of Awards.

*BALTIMORE, MD.—Bids were received by the Board of Awards, at the office of J. Sewell Thomas, City Register, on May 11, for Contract 51, which calls for furnishing building and erecting the electrical and mechanical equipment for the sewage disposal works at Back River. The lowest bidder was the McKay Engineering Co., 9 East Lexington St., Baltimore, at $42,000. Calvin W. Hendrick is Ch. Engr., Sewer Comn.

RICHMOND, VA.—The Council Committee on Electricity has accepted the plans presented by Samuel Cohn, J. G. Corley, representing the Retail Merchants' Association, for the illumination of Broad St., from Pine St. to the City Hall. The plan calls for the erection of six ornamental posts carrying five tungsten lamps to each block. Estimated cost of initial installation $26,500; annual cost of maintenance $2,500, less the cost of arc lamps now in use.

SALTVILLE, VA.—Contract has been awarded by the Nathieson Alkali Works to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for additional electric equipment for its plant, including two 75-KW., oil-filled, self-control, 2,200-200-volt transformers, one 175-KW., 220-volt, 2-phase 60-cycle, 225 r. p. m., engine type alternator, one 10-KW. exciter unit and switchboard.

GREENVILLE, S. C.—The citizens have voted to accept the proposition submitted by J. B. Duke and associates to furnish three-fourths of the capital to erect a $100,000 plant to furnish electricity to light the city. The remainder is to be raised in Greenville.

CAIRO, GA.—The city has voted to issue $6,000 bonds for improvements to the electric light system. J. M. McNair is City Clk.

ANNISTON, ALA.—Preparations are being made for enlarging the electric plant of the Anniston Electric & Gas Co., including the installation of an electrical generator. The company is erecting a high-tension transmission line between Anniston and Talladega, and will furnish electricity to towns and villages between the two cities. R. W. Mitchell is Pres.

BIRMINGHAM, ALA.—Bids will be received at the office of the Board of Education until noon, June 1, for furnishing and installing three steam heated mechanical blast heating and ventilating plants in the public schools of the city. Martin J. Lide is Consulting Engr.

MACON, MISS.—The City Council is considering enlarging and improving the municipal electric light plant and water-works system.

MACON, MISS.—See item under Light and Power Plants.

ELIZABETHTOWN, TENN.—The Doe River Lighting & Power Co., which lately awarded contract to the LOWE CONSTRUCTION CO., of Bristol, Tenn., for the construction of a dam at Horseshoe Bend, on Wautauga River, is in the market for machinery for its power-house. The electrical equipment will include two 100-KW. 3-phase, 60-cycle, 2,300-volt generators, three step-up transformers to transform current from 2,300 to either 22,000 or 33,000 volts, and three step-down transformers to change the voltage back to 2,300 volts; switchboard complete, with instruments and copper wire, etc., for a 22-mile high-tension transmission line. The water-power machinery will consist of three turbines to operate under a 50-ft. head developing 1,200 HP. each, and two governors. Estimated cost of dam and power plant, $250,000. The company invites inspection of the property not later than May 15 and bids not later than June 1. J. H. Grayson is Gen. Mgr.

NEW CONCORD, OHIO.—On Many 3 the Village Council awarded contract to FAIRBANKS & MORRISON, of Columbus, for the construction of an electric light plant at $10,200.

COLUMBUS, OHIO.—The ERNER & HOPKINS CO., of Columbus, has been awarded contract for installing the power-plant in the Franklin County Tuberculosis hospital, at $5,456.

SULLIVAN, IND.—The Sullivan Electric Co. has approved plans on which bids will be received for the remodeling of a large warehouse into an electric light and power plant.

OWENSVILLE, IND.—Plans have been ordered for the improvement and extension of the Central electric light plant.

NEW MARKET, IND.—The New Market Light Co. has ordered plans for the construction and equipment of a new gas plant. W. V. Yonkit is Pres.

TERRE HAUTE, IND.—The Citizens Gas Co. is planning to spend $300,000 for improving and enlarging its plant.

FLINT, MICH.—The Flint Electric Co. has made application to the State Public Utilities Commission for permission to issue $100,000 of bonds to take up outstanding debentures and for improvements to the plant.

OAKWOOD, MICH.—The Village Council has granted a franchise to the Edison Electric & Power Co. to furnish electricity for lamps and motors here.

SPRINGFIELD, ILL.—The Springfield Gas Light Co. will erect a $100,000 plant and expects to start work this fall. Address H. T. Willett, Unity Bldg., Springfield.

AMES, IOWA.—The Ames Gas. Co. has let contract to the AMERICAN CONSTRUCTION CO., of Newton, Iowa, for the erection of a plant, including the laying of twelve miles of mains.

ABERDEEN, S. DAK.—Contract for installing lamps and electric wiring for three buildings at the Northern Normal & Industrial School, bids for which were opened on May 3, has been awarded to the HUB CITY HEATING & PLUMBING CO., of Aberdeen.

BUTTE, MONT.—The Anaconda Copper Co. has awarded contract to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for 15 150-HP., 3-phase, 2,200-volt, 60-cycle squirrel cage motors. The motors will be used to operate plunger mine pumps, two motors being used for each pump. A single panel control board is to be supplied for each pump unit.

PALMYRA, MO.—The citizens have voted to issue $35,000 of bonds to be used to acquire or construct an electric light plant.

SAVANNAH, MO.—F. C. Barr[illegible]on, of St. Joseph, will receive bids abou[illegible]ne 15 for the construction of an electri[illegible]ght plant here. Estimated cost, about $2[illegible]

OSCEOLA, MO.—Utt Brother[illegible]nd L. J. Highland, Engr., 108 La Salle [illegible] Chicago, are interested in a project to [illegible]struct a steel and concrete dam acro[illegible]e Osage Run. Estimated cost, $25,000; [illegible]quipment $25,000. An auxiliary plant wi[illegible]o be installed. Estimated cost, $50,00[illegible] is proposed to develop 1,000 HP.

WALDRON, ARK.—The city [illegible] engaged F. W. Gantt, of the Sequoyah [illegible]gineering Co., of Fort Smith, Ark., to p[illegible]e plans for a municipal electric light pl[illegible]

WILSON, ARK.—Preparations [illegible] being made by Lee Wilson & Co. for [illegible] building their power plant which was rece[illegible] burned. It is understood that the initial [illegible]ipment has been purchased, but more [illegible] be required later.

FORT LOGAN H. ROOTS, ARK.[illegible]ds are asked by the Constructing Quarter[illegible]ter, U. S. A., until June 6 for installi[illegible] a hot-water heating system in Barracks [illegible]

BRYAN, TEX.—Prof. J. C. N[illegible] City Engr., will prepare plans for a [illegible] water and light plant and sewer system.

CANON CITY, COLO.—The Colora[illegible] Light & Power Co. has awarded contra[illegible] to the ALLIS-CHALMERS CO., of Milwau[illegible] Wis., for an 1,875-KVA., 560-volt, 3-ph[illegible] 30-cycle, low-pressure steam turbo-[illegible]erator set. Steam from the present units will sup-ply the new turbine.

GLENDALE, COLO.—Plans have been approved for the installation of a large power plant at the Jaeger group of mines, located near here. The plant will furnish power to operate the mines and driving of the Jaeger tunnel from the present breast at 350 ft. from the portal on Left Hand Creek to cut the several veins of the group at great depth. C. B. Hull is Engr.

CHICO, CAL.—Plans are being prepared by the Northern Electric Ry. Co. for the erection of a power station at Lake Winola. Estimated cost, $30,000.

SAN BERNARDINO, CAL.—Contract has been awarded to W. E. PEDLEY, of Riverside, Cal., by the Consolidated Reservoir & Power Co., Central Bldg., Los Angeles, for the construction of a concrete conduit, about 5½ miles long to carry 900 ins. of water from the intake of the White Water Reservoir & Power project, now owned by the Consolidated Co., to the proposed power plant site in San Gregorno Canyon. The contract price is $66,750. Geo. I. Lamy, Central Bldg., Los Angeles, is Chief Engineer.

SAFFORD, ARIZ.—S. S. Campbell has secured a franchise to construct and maintain a water and electric power system here, water to be piped from the Graham Mountains, electric power to be generated en route.

CISCO, UTAH.—Bids will be received by the Hampson-Fielding Engineering Co., Denver, Colo., until June 30, for the construction of a power plant for irrigation purposes for the Grand Valley Fruit & Water Co., to be constructed at Cisco. Estimated cost, $500,000.

MOUNTAIN HOME, IDAHO.—We are officially advised that the Crane Falls Power & Irrigation Co. will immediately commence the construction of the feed canal and headworks of its power plant at Crane Falls, on the Snake River, about 15 miles southwest of the town of Mountain Home. The plant will have a capacity of 14,000 HP., which will be mainly used for lighting and heating purposes in the southwest portion of the state, and in connection with pumping water for the irrigation of lands along Snake River. Contracts have been arranged with desert land entrymen in the vicinity of Grand View, Idaho, to furnish water for about 10,000 acres, and the company's future plans include the irrigation of about 10,000 additional acres in the same neighborhood. It is expected that further plans will provide for running transmission lines into the mining regions of northern Nevada, as electric power has long been felt to be essential to the development of the mines in that section of the country. The development is being financed by Canadian capital from Toronto and Montreal; Smith, Kerry & Chace, of Toronto, are the engineers and promoters. They have opened an office at Mountain Home, the engineer in charge being G. Vansittart. The plant will be ready for operation by the first of the year.

PORT ARTHUR, ONT.—Bids will be received until 9 a. m., May 25, by Adam Beck, Chn. Hydroelectric Power Comn., for the construction of transformer station building, superstructure according to plans and specifications to be obtained at the offices of the Commission, Continental Life Bldg., Toronto, or at the office of the City Engineer at Port Arthur. Separate bids for structural steel work will receive consideration.

WINNIPEG, MAN.—The Winnipeg St. Ry. Co. will shortly erect a retort house on the east side of Gladstone St. Estimated cost, $20,000. The new structure is to be 70 ft. by 75 ft.

CAMROSE, ALTA.—M. A. Maxwell, of Boston, Mass., has been engaged by the city to prepare plans for a municipal electric light plant, to be located probably on Stony Creek, east of the Grand Trunk R. R. bridg[illegible]

SAN LUIS POTOSI, MEXICO.—The electric light and power plant of the Potosi Electric Co., in this city, has been acquired by the Central Mexico Power Co., a subsidiary concern of the Guanajuato Power & Electric Co., which plans to supply this city with 5,000 HP., and more, if needed.

OCAMPO (CHIHUAHUA), MEXICO.—Jack R. Darrach, of El Paso, Tex., and associates, who are operating the Santa Librada group of gold mines near here, will install a 300-HP. electric plant and transmit the energy ten miles to the mines.

BRIDGES.

(denotes that this work is advertised in Engineering News.)*

*NEW YORK, N. Y.—Bids or estimates will be received by the New York Interstate Bridge Commission and the New Jersey Interstate Bridge Commission, in joint meeting, at the offices, No 115 Broadway, Borough of Manhattan, New York, until 4 p. m., June 2, for making test borings at a proposed site of the Hudson River bridge over the Hudson River, at or about West 109th St., and at or about West 179th St., New York City, to suitable points on the opposite shore in New Jersey. Separate bids must be made for each of the above sites, and the contract for each site will be separately let, according to the terms for proposals, copies of which may be obtained upon application at the offices of the Joint Commissions. For full information, address New York and New Jersey Interstate Bridge Commissions, No. 115 Broadway, New York City. Forms of proposal are also on file at the office of Engineering News, New York, for distribution.

SYRACUSE, N. Y.—The W. J. BURNS CO., of Syracuse, has been awarded contract for the construction of two bridges crossing the properties of the Syracuse, Lakeshore & Northern R. R. and the New York Central R. R. on the line of the Delaware, Lackawanna & Western R. R. Co.'s new line from the Halcomb Steel Works to E. R. Rice's coal yard at the foot of Plum St.

BUFFALO, N. Y.—Bids will be received by the Department of Public Works, until 11 a. m., May 20, for repair of the timber and planking of roadways and walks of all bridges and approaches and the walks and stairways of all viaducts maintained by the city. Francis G. Ward is Comr.

ROME, N. Y.—LAY & WALPOLE, of Owego, N. Y., have been awarded contract for the construction of a steel bridge over the Mohawk River here. Estimated cost, $6,000. John S. Plunkett is City Engr.

FULTON, N. Y.—Bids are asked until 8 p. m., May 23, by the Board of Public Works for a design, specification and construction of a reinforced-concrete culvert over Outlet Creek on Hannibal St. The span must have a clear opening of at least 70 sq. ft.; crown of arch must be at least 7 ft. above bed of creek; foundation at least 2½ ft. below bed of creek; head walls at least 15 ft. in length, measured from center of arch; length of arch, 66 ft.; designed so as to carry a load of 20 tons; height of road above bed of creek, about 22 ft. T. A. Foster is Pres. Bd.

*JAMESTOWN, N. Y.—We are officially advised that bids were received as follows on May 14 by the Board of Estimate and Review for the construction of two reinforced concrete bridges, one at Windsor St. and the other at Fairmount Ave.: (a) Windsor St.; (b) Fairmount Ave.: Reinforced Concrete Construction Co., Fulton Bldg., Pittsburg, Pa., (a) $14,680, (b) $31,800; Nicola Bldg. Co., Farmers Bank Bldg., Pittsburg, (a) $15,682, (b) $36,023; F. M. Roessing, Ferguson Bldg., Pittsburg, (a) $14,370, (b) $32,598. (All of the above bids stipulate that traffic is to be closed during construction.) MAHONEY & SWANSON, Jamestown (a) $12,370, (b) $28,656 (awarded contracts.) The bid of this firm stipulates that traffic is to remain open during construction. Richard Irwin, 507 House Bldg., Pittsburg, Pa., is Engr.

SOMERVILLE, N. J.—The Board of Freeholders of Somerset and Morris Counties have let contract to the FERRO-CONCRETE CO., Union Trust Bldg., Harrisburg, Pa., for the construction of the Sterling reinforced-concrete bridge over the Passaic River, between the counties.

PHILADELPHIA, PA.—Contract for the superstructure of the bridge across the Schuylkill River at Ivy Rock to connect the mills of Richard Heckscher & Sons Co. with the plant of Alan Wood Iron & Steel Co., has been awarded to the PENNSYLVANIA STEEL CO., of Steelton, Pa.

INDIANA, PA.—Contract for building a concrete bridge over Altman's Run in Jacksonville was awarded on May 5 by the County Commissioners to P. J. McGOVERN, at $9 per cu. yd. M. Bennett & Sons were the only other bidders, at $9.48 per cu. yd.

BUTLER, PA.—Bids are asked until noon, June 1, by the County Commissioners for constructing several bridges. W. B. Scott is Clk.

DENTON, MD.—The County Commissioners have awarded to the LUTEN BRIDGE CO., of York, Pa., contract for building the new bridge of reinforced concrete over the northwest fork of the Nanticoke River.

SPARTANSBURG, S. C.—Bids are asked until May 25, by D. M. Miles, County Superv., for the construction of a steel bridge over the Enoree River, known as the Van Patton bridge.

SILVER CREEK, MISS.—The Board of Supervisors has let contract for a steel bridge at Silver Creek to the MEMPHIS BRIDGE CO., Memphis, Tenn.

MEDINA, OHIO.—Bids will be received by the Board of Commissioners of Medina County until May 23 for the construction and repair of various bridges. Clyde Harvey is County Surv.

URBANA, OHIO.—Bids will be received by the Board of Commissioners of Champaign County until 11 a. m., May 23, for the construction of the superstructure of the McCrery bridge No. 158. C. E. Russel is County Audr.

WAUSEON, OHIO.—Bids will be received by C. J. Ives, Audr. of Fulton County, until 10 a. m., May 24, for the construction of three bridges.

BARTON, OHIO.—Bids will be received by E. E. Shepherd, Audr. of Belmont County, St. Clairsville, Ohio, until 1 p. m., May 31, for the construction of a bridge at Barton, in Coleraine Township.

TROY, OHIO.—Bids are asked by A. E. Sinks, County Audr., until 10 a. m., June 8, for the materials and labor for the construction of various bridges.

KENTON, OHIO.—The Board of Commissioners of Hardin County has let contract to the CHAMPION IRON CO. and the JAMES DOW MACHINE CO. for the construction of various bridges.

CLEVELAND, OHIO.—The REPUBLIC STRUCTURAL IRON WORKS CO., 1270 E. 53d St., Cleveland, has been awarded contract by the city for strengthening the Superior viaduct. The work includes furnishing and placing adjustable truss roads for roadway stringers and furnishing and placing floor beams. Bids were opened on May 5.

GREENFIELD, IND.—Bids are asked until 10 a. m., June 20, by the County Commissioners for the construction of a steel bridge over the Blue River. C. H. Troy is Audr. Hancock County.

RUSHVILLE, IND.—Bids will be received by the Board of Commissioners of Rush County until May 24 for the construction of six concrete bridges, one 55 ft., one double bridge, 37 ft. 6 ins., one 200-ft. waterway, consisting of one 80 and two 60-ft. arches, one 18, one 14 and one 24-ft. A. L. Stewart is County Engr.

LA FAYETTE, IND.—The Commissioners of Tippecanoe County will soon ask for bids for the construction of a 94-ft. span bridge 16 ft. wide over Burnett's Creek at Battle Ground.

WORDEN, ILL.—Bids will be received by J. F. Johnson, Town Clk., until 11 a. m., May 23, for the construction of a reinforced-concrete bridge.

STREATOR, ILL.—PHILIP SCHLACHTER, Jr., of Streator, has been awarded contract by the Milwaukee Bridge Co. for all the work on the new $40,000 bridge in this city except the steel work.

DANVILLE, ILL.—R. C. SPANDAU, of Danville, has been awarded contract, at $6,500, for the construction of the Woods' Ford bridge, south of Bismarck. The bridge will be of reinforced concrete throughout, 200 ft. in length, four spans of 50 ft. each, with concrete floor base, covered with dirt and gravel.

HIGHLAND PARK, ILL.—See item under Streets and Roads.

WATERTOWN, WIS.—Bids will be received by the Board of Park Commissioners until 2 p. m., May 28, for constructing a bridge. Arnold Kraeft is City Engr.

COHASSET, MINN. — The CENTRAL STATES BRIDGE CO., of Indianapolis, Ind., has been awarded contract for the construction of a steel and concrete bridge. Bids were opened on May 3.

LINCOLN, NEB.—Bids will be received by H. E. Wells, County Clk., Lancaster County, until 2 p. m., June 2, for the construction and completion of all bridges that may be ordered for a term of one year from date of contract.

*ST. LOUIS, MO.—Bids are asked until June 21 by the Board of Local Improvements for the removal of the present wooden bridge on Kingshighway, and the construction of the foundations and concrete work of a concrete viaduct with all necessary approaches on Kingshighway from Manchester Ave. to McRee Ave. Plans, specifications, form of contract and proposal blanks may be obtained from the Street Commissioner, Room 324, New City Hall.

ALTAIR, TEX.—Contract for the foundation footing for the new 275-ft. span bridge across the Colorado River at Altair, has been awarded to the GULF CONCRETE CONSTRUCTION CO., of Houston, Tex.

ARCADIA, TEX.—Bids are asked until 8.30 a. m., May 31, for constructing from 50 to 100 bridges. Address Galveston County Drainage District No. 1, B. F. Johnson, Secy. R. W. Luttrell is Engr.

HOUSTON, TEX.—Plans for the Main St. viaduct have been completed by F. L. Dormant, City Engr. The plans call for a complete reinforced-concrete structure 1,600 ft. in length, from the foot of Commerce Ave. to Montgomery Ave., spanning both the ship channel and White Oak Bayou. The viaduct will have a roadway 45 ft. wide, with sidewalks on each side, 7½ ft. in width. The railings along the sidewalks will be of reinforced concrete and on the bed of the roadway brick will be laid. A double track for street cars is provided for by the plans. The arch spanning the ship channel will be 58 ft. above mean low tide, while the arch across White Oak Bayou will be 42 ft.

FORT SILL, OKLA.—See item under Water Supply—Irrigation.

UNA, COLO.—Bids will be received by Charles W. Comstock, State Engr., Denver, until noon, May 28, for the construction of a steel bridge across the Grand River, near Una, Garfield County.

LACY, COLO.—Bids will be received by Charles W. Comstock, State Engr., Denver, until noon, May 28, for the construction of a steel bridge across the Grande River, near Lacy, Garfield County.

TRENT, WASH.—Contract for the construction of the county bridge just east of here was warded on May 5 to A. H. STRATTON, at $10,350. The timber now in this bridge is to be replaced with steel. There are two spans, each 198 ft. long to be reconstructed.

BELLINGHAM, WASH.—The INTERNATIONAL CONTRACT CO., New York Block, Seattle, has been awarded contract for building a new steel span to the Nugents bridge, at $17,995.

MONTESANO, WASH.—Contract for building the new bridge over the Chehalis River at this place has been let by the County Commissioners to BRALEY & WHITLOCK, at $44,730.

SPRINGFIELD, ORE.—L. N. ROONEY, of Eugene, Ore., has been awarded contract by the Portland, Eugene & Eastern Ry. Co. for the completion of the bridge across the Willamette River here.

WINNEMUCCA, NEV.—Seven bids have been received by the County Commissioners for the Humboldt River bridge here as follows: Mervy-Elwell Co., San Francisco, $17,930; Western Bridge Co., Sacramento, $14,900; Cotton Bros., Oakland, $16,860; RENO CONSTRUCTION CO., Reno, Nev., $14,469 (awarded contract); Midland Bridge Co., Kansas City, $18,710; Mercer-Frazier Co., San Francisco, $18,000; Pacific Coast Co., San Francisco, $18,100. The specifications call for a reinforced-concrete structure 135 ft. in length by 30 ft. in width of two spans, with 55-ft. arch.

NEWMARKET, ONT.—Bids are asked by Barber & Young, Engrs., 57 Adelaide St., Toronto, until noon, May 23, for the construction of a reinforced-concrete arch bridge of 60-ft. span over the Holland River at Timothy St. here.

BUILDINGS.

(denotes that this work is advertised in Engineering News.)*

CAMBRIDGE, MASS.—We are officially advised that the City will erect soon a school to cost $90,000 and a contagious hospital to cost $95,000. William F. Brooks is Mayor; Lewis M. Hastings, City Engr., and Edward J. Brandon, City Clerk.

*FORT STRONG (Boston post-office), MASS.—Bids are asked by Capt. A. M. Miller, Constr. Q. M., 263 Summer St., Boston, until 10 a. m., June 16, for the construction, including plumbing, heating, electric wiring and fixtures of an addition to the guard-house at Fort Strong, Mass.

PLATTSBURG, N. Y.—Bids are asked until 10 a. m., June 9, by Capt. Edward T. Hartmann, Constr. Q. M., for the construction of one 4-set officers' quarters at Plattsburg Barracks, N. Y., including plumbing, heating and electric wiring and electrical fixtures.

BUFFALO, N. Y.—We are officially advised that Colson & Hudson, 35 Dun Bldg., have completed plans for a 6-story and basement warehouse, 43 × 125 ft., to be erected at Washington and Mohawk Sts., by William H. Hotchkiss, 656 Ellicott Sq. Bldg. Gerber, Nott & Co., Lessees. It will be of steel frame and brick construction, taking 425 tons structural steel and will have one freight and one passenger elevator. GEORGE SCHAAF has been awarded the general contract and the other contracts follow: Heating and plumbing, BARND & GEIGER, 11 East Mohawk St.; wiring, BUFFALO ELECTRIC CONTRACTING CO., 62 Niagara St.; elevators, OTIS ELEVATOR CO., 17 Battery Pl., New York; steel and iron, BUFFALO STRUCTURAL STEEL CO., 166 Dart St.

NEW YORK, N. Y.—Plans have been filed by W. L. Rouse and L. A. Goldstone, Archs., 12 West 32d St., for a 12-story apartment to be erected on the southeast corner of Broadway and 98th St., for Samuel Borchardt. The building is to cover a plot 100 × 180 ft., and is laid out with a total of 485 large rooms, in apartments varying from two rooms and bath to eight rooms and three baths. The building will be equipped with four high-speed electric elevators. The estimated cost of the structure complete is $1,000,000.

Goldwin Starrett & Van Vleck, Archs., 103 Park Ave., have filed plans for the proposed 10-story extension to the James McCreery & Co. department store, at 4 to 16 West 35th St. and 1½ to 9 West 34th St., at a cost of $240,000. The extension is to be built on the west side of the present building. It will conform in design with the older structure. There is to be a recreation shelter on the roof, and one passenger elevator and two freight elevators.

Plans have been filed for a 12-story loft building to be built on the south side of 22d St., 437 ft. west of Sixth Ave., for the Ritaro Realty Co., 44 Court St., Brooklyn. The building will have a frontage of 62.6 ft. and a depth of 90 ft., the facade being of brick, with trimmings of granite and limestone. The 3-story old-fashioned dwelling houses will be torn down to allow for the building of the loft building. George A. Boehm, Arch., 7 West 42d St., estimates the cost at $250,000.

The plans for the 12-story brick lofts to be on the east side of Fourth Ave., 49.6 ft. north of 26th St., have been filed by Carrere & Hastings, Archs., 225 Fifth Ave., for the owner, Mrs. Phebe S. Sinclair. The building will cover the site of the old Putnam House. It will have a frontage of 49.3 ft. on Fourth Ave. and will be L shaped, running to the north side of 26th St., with a frontage there of 41.10 ft. The facade will be of limestone, with terra cotta trimmings. The building is to cost $270,000.

Plans have been filed for erecting a 7-story and basement storage and loft building at 98 Gansevoort St., for Henry P. and George R. Kirkham at a cost of $70,000. J. G. Glover is Arch. The new building will take the place of an old 3-story hotel.

NEW YORK, N. Y.—We are officially advised that the Grand Central Station Architects, 314 Madison Ave., New York, have filed completed plans for the mercantile buildings to be erected at Lexington Ave. and 46th and 47th Sts. On March 10, we stated, officially, that "the New York Central & Hudson River R. R. Co. has let contracts for the construction of two buildings to cover the blocks between Lexington Ave. and Depew Pl., 46th and 48th Sts., Manhattan. They will be twelve stories high and will cost about $4,000,000. Each building will cover about 16 city lots and will be connected by a series of bridges, which will be built over 47th St. The work of construction will begin in about a month. The building on the block between 46th and 47th Sts., Lexington Ave. and Depew Pl. will be the first to go up, as it has been leased to several concerns, including the New York Furniture Exchange, from April, 1911. The north building will then be started. The structures will be built by JAMES STEWART & CO., 30 Church St., from plans by the Grand Central Station Architects, 314 Madison Ave. One of the features of the south building will be a coliseum three stories high. This will be used for trade conventions and the exhibitions of merchandise and machinery. There also will be club-rooms, offices and consultation rooms, all of which will be on one floor. The firm of architects mentioned above is comprised of Reed & Stem, 7 East 42d St., and Warren & Wetmore, 3 East 33d St."

Plans have been filed by Schwartz & Gross, Archs., 347 Fifth Ave., for a 6-story apartment house to be built at the southeast corner of Sherman Ave. and Emerson St., with a frontage of 155 ft. on the avenue and 90 ft. on the street. There will be accommodations for eighty families. It is to cost $125,000. The Hensel Construction Co., of which Charles Hensel is Pres., is the owner.

The lots at the southeast corner of West End Ave. and 90th St., and at the northwest corner of Broadway and 89th St. have been bought by George F. Johnson and Leopold Kahn for about $800,000. They will put up on the corners two apartment structures that will cost about $1,000,000 each.

Plans have also been filed for building a 12-story loft structure to be built at 30 and 32 West 24th St., just east of the rear entrance of the Eden Musee and on the block with the new Masonic Temple. The facade will be of brick, with granite and terra cotta trimmings. It is to be built for the Marmac Construction Co., of which Hubert B. McLellan is Pres. The cost is estimated at $200,000 by Browne & Almiroty, Archs., 3 West 39th St.

Plans have also been filed for a 6-story apartment house to be built on the south side of 131st St., 100 ft. west of Amsterdam Ave., for the Nestor Holding Co., Jacob Manheim, Pres. It will contain apartments for 35 families. Samuel Sass, 23 Park Row, is Arch. Cost, $50,000.

NEW YORK, N. Y.—The following bids were received on May 10 by the Board of Health to erect, exclusive of foundations, two open-air reinforced-concrete pavilions, together with all the work incidental thereto upon the grounds of the Riverside Hospital at North Brother Island, Borough of Bronx: McHarg-Barton Co., 165 Broadway, New York, $76,700; George Hilderbrand, 38 Park Row, $109,324; Daniel J. Ryan, $92,992; M. J. O'Connor, $104,000; Luke A. Burke & Sons, 42 West 25th St., $97,000.

NEW YORK, N. Y.—Bids are asked by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, until 11 a. m., May 31, (1) for alterations, repairs, etc., at Public Schools Nos. 2, 4, 10, 13, 27, 30, 32, 39, 40 and 46, Boro. of Brooklyn; (2) for alterations, repairs, etc., at the Brooklyn Athletic Field, East 17th St., between Aves. K and L, Boro. of Brooklyn; (5) for alterations, repairs, etc., at Public Schools Nos. 6, 7, 8, 11, 12, 32, 33, 34 and 36, Boro. of the Bronx, (6) for alterations, repairs, etc., at Public School No. 168, 104th and 105th Sts., near Second Ave., Boro. of Manhattan.

UTICA, N. Y.—We are officially advised that the HENNEBIQUE CONSTRUCTION CO., 1170 Broadway, New York, has secured the general contract to erect a department store in Utica, N. Y., five stories, 125 × 150 ft., reinforced-concrete skeleton with brick, limestone, terra cotta and granite facings. The contract also includes elevators, heating, lighting, ventilating system and power plant. The contractors will be ready for figures on all sub-contracts about June 1.

*MADISON BARRACKS (Sackett Harbor post-office), N. Y.—Bids are asked by the Constructing Q. M. until 2 p. m., June 11, for the removal of old wooden stable, and construction, plumbing, and electric wiring and fixtures of new stable at this post, and necessary roads in connection therewith.

MONT ALTO, PA.—A contract amounting to approximately $106,000 for improvements and a new building at the State Sanitarium, near Mont Alto, Franklin County, has been awarded to CHARLES W. DENNY, 1330 Arch St., Philadelphia. The contract calls for additions to the general dining building, the nurses' and physicians' dining building at the infirmary, as well as a further enlargement of the same building and the erection of a pavilion.

PHILADELPHIA, PA.—A. B. & C. F. Millett, 5209 North Broad St., are having plans prepared for 20 2-story houses, 16 × 54 ft. each, to be built at Eleventh and Rockland Sts., Logan, at a cost of about $90,000.

Plans have been completed by Carl P. Berger, Arch., Penn Sq. Bldg., for the necessary improvements to the old House of Refuge property, on the block bounded by 22d St., Girard Ave. and Poplar St., to fit it for the use of the Lankenau School for Girls of the Mary J. Drexel Home. The whole plot, measuring 221 × 681 × 717 ft., is to be rebuilt. The property was bought a year ago. The former administration building, south and west wings, are to be remodeled. The north wing is to be torn down and a new and larger building, for bathing, recreation and dressing rooms, an auditorium, with stage and dormitories, will be erected on the site. The architect and A. Raymond Raff are taking bids.

Work has been started by JAMES G. DOAK & CO., 1240 Chestnut St., contractors, on the demolition of ten old houses at the southwest corner of 23d and Market Sts., preparatory to the erection of a big garage, 120 × 105 ft., for the Auto-Car Co. Plans have been prepared by Stern & Castor, Stephen Girard Bldg. The building will be of fireproof construction and will cost $90,000.

SEWICKLEY, PA.—Bids were received as follows on May 14, by the Supervising Architect of the Treasury, Washington, D. C., for the construction of a post-office at Sewickley, Pa.: William H. Fissell & Co., 1133 Broadway, New York, $61,700; Ambrose B. Stannard, St. James Bldg., New York, $59,590; Brieck Bros., Williamsport, Pa., $65,500; M. P. Wells, Witherspoon Bldg., Philadelphia, $53,977; Charles W. Peckworts, New York, $63,655; Constable Bros. Co., Erie, Pa., $57,970.

PITTSBURG, PA.—The northeast corner of Whitfield and Kirkwood Sts., East End, in the rear of the Bethany Evangelical Lutheran Church, is to be improved with an apartment building. The Whitfield Land Co.,

it is announced, has decided to erect this building, which will cost about $50,000. The lot is 70 × 70 ft.

BALTIMORE, MD.—The Western Maryland Ry. Co. has concluded a deal, it is stated, with the Baltimore Fidelity Warehouse Co. for the purchase of the latter's wharves, warehouses and other property at Lazaretto Point and at the foot of York St. The purchase price is $500,000. The Western Maryland will spend $250,000 improving these properties and Brown's wharf, which it also owns. The property acquired comprises seven acres at Lazaretto Point. About 1,100 ft. is directly on the water front and over 500 ft. on the ship channel. There are railroad tracks connecting the wharves and warehouses and this road also connects with the Pennsylvania system and the Canton belt line. The terminal plans of the Western Maryland in and around Baltimore as a result of the alliance with the Pittsburg & Lake Erie, a New York Central subsidiary, involve a total expenditure of upward of $3,000,000 within twelve months. Additional terminals will be acquired, a central building erected and other improvements made which will give the system better facilities at this port. H. R. Pratt, Baltimore, Md., is Ch. Engr.

*CHARLESTON, S. C.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., June 16, for a new plumbing system at the U. S. custom-house, Charleston.

ATHENS, GA.—James Knox Taylor, Superv. Arch., of the Treasury Dept., Washington, D. C., has awarded contract for the construction of a post office at Athens, Ga., to the NEWPORT CONTRACTING & ENGINEERING CO., Newport News, Va., at $40,880.

*SHREVEPORT, LA.—Bids were received as follows on May 16, by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office at Shreveport, La.: A. Skoog, Shreveport, La., $209,770; William H. Fissell & Co., 1133 Broadway, New York, $172,500; Tom Lovell & Son, Denton, Tex., $179,541; M. Yeager & Son, Danville, Ill., $175,124; Richard E. Heningham, 1 Madison Ave., New York, $179,827; Charles W. Peckworth, 415 Hudson St., New York, $169,642; L. R. Wright, Dallas, Tex., $187,000; King Lumber Co., Charlottesville, Va., $197,870; John Bardon, Fort Worth, Tex., $188,500. Time, Nov. 1, 1911.

SHREVEPORT, LA.—The Methodists will erect a church, to cost $40,000, on a site on Jordan St. The funds for this purpose are in the hands of the Building Committee, of which C. S. Prestridge, of this city, is Chn.

LAKE CHARLES, LA.—The City Council, on May 7, acted favorably on the report of the Fire Committee, which recommended the immediate erection of a central fire station. Additional ground will be bought in the square for a new city hall, as well as for a new fire station. It was suggested that a petition be circulated for signatures of property owners asking for an election on a bond issue for this purpose. A 3-mill tax was proposed for a period of 30 years, which would yield about $200,000. This money is to be expended in a $25,000 fire station and apparatus; $100,000 is to be devoted to street paving, and $75,000 is to go to a new city hall and furniture. The fire station plans will be called for at once and work started as soon as the Mayor purchases a site. Authority has been given him. Col. C. H. Stevens, of New Orleans, exhibited sketches for a central fire station, costing $20,000, fully equipped, with all apparatus, which met with the approval of the Council, and will probably be adopted.

COLUMBUS, OHIO.—Plans have been completed by Howell & Thomas, Archs., Columbus Savings & Trust Bldg., for an art building to be built at the St. Mary's of the Springs Academy, near Columbus. The contract will be let soon.

David Riebel & Sons, Archs., New First National Bank Bldg., are preparing plans and specifications for a 4-story fireproof building to be erected by the Columbus Terminal Warehouse Co., on North High St. The structure will be 62½ × 181 ft.

COLUMBUS, OHIO.—Bids for two school buildings and the addition to the Reeb Avenue School were opened by the Clerk of the Board of Education of Columbus, on May 9. The bids are: Heyl Ave. School building—Whole bids for I-beam construction: D. W. McGrath, New First National Bank Bldg., material $50,000, labor $50,000, total $100,000; Francis Bros. Co., 165½ North High St., Columbus, material $64,750, labor $30,000, total $94,750; John H. Hina, materials $60,000, labor $39,990, total $99,990. For reinforced concrete construction—D. W. McGrath, materials $50,000, labor $48,800, total $98,800; Francis Bros. & Co., materials, $62,750, labor $30,000, total $92,750; John H. Hina, materials $60,000, labor $39,990, total $99,990.

West Broad St. School—Reinforced concrete construction: D. W. McGrath, materials $50,000, labor $48,800, total $98,800; Francis Bros. Co., materials $62,750, labor $30,000, total $92,750; John H. Hina, materials $60,000, labor $41,000, total $101,000; E. K. Hibbs, materials $45,825, labor $45,825, total $91,680.

Reeb Ave. School building addition—I-beam construction: John H. Hina, materials $25,000, labor $19,100, total $44,100. Reinforced concrete construction: Materials $25,000, labor $19,000, total $44,000. This is the second advertising for this work and it is expected that contracts will be let soon.

YOUNGSTOWN, OHIO.—We are officially advised that the Mahoning National Bank will erect a new banking building. The structure, on the site of the old building at the southwest corner of Central Sq., will be a 12½-story building, 50 × 80 ft. The first floor will be occupied by the Mahoning National Bank and the Mahoning Savings & Trust Co., allied concerns, while the remaining floors will be fitted for office purposes. Eight offices, capable of sub-division, are provided for on each floor. The building will be of structural steel and reinforced concrete construction. The ground floor exterior is to be of gray granite and above this the exterior of the building will be finished in white glazed terra cotta. The office and elevator entrance to the building on Central Sq. immediately adjoining the Grand Opera House, will be finished in marble and mahogany and the office sections of the building in oak and marble. The bank entrance will be located in the middle of the Market St. frontage of the building. Plate glass will be used throughout the building. The following contracts have been awarded: Steel, FOREST CITY IRON & STEEL CO., Cleveland, Ohio; masonry, NEIDERMEIER & RESTLE, Youngstown; carpentry, FRED HOHLOCH, Youngstown. Albert Kahn, Trussed Concrete Bldg., Detroit, Mich., is Arch. The officers of the Mahoning National Bank are: Pres., Edmond L. Brown; Vice-Pres., W. Scott Bonnell; Vice-Pres., W. A. Beecher; Cashier, Thomas A. Jacobs; Asst. Cashier, W. J. Roberts. Pending the erection of the new home the Mahoning National Bank occupies temporary quarters at 11 Central Sq.

CINCINNATI, OHIO.—The nine large railroads which enter this city have agreed upon the general plan of development for the proposed union station, to cost approximately $30,000,000, according to press reports. They have agreed to guarantee the bonds of the Cincinnati Union Depot & Terminal Co., the concern which will operate the terminal system. The Ohio Legislature has passed the necessary measures to allow the plans for the terminal to be completed, and the Cincinnati City Council has agreed to grant the necessary franchises. The nine railroads which will be mostly benefited by the new terminal are the Pennsylvania, the Big Four (Cleveland, Cincinnati, Chicago & St. Louis), the Baltimore & Ohio, the Cincinnati, Hamilton & Dayton, the Chesapeake & Ohio, the Louisville & Nashville, the Norfolk & Western, the Southern, and the Chicago, Cincinnati & Louisville. John E. Bleekman, Pres. of the Southwestern Ohio Traction Co., has perfected the organization of the present Cincinnati terminal plan. Charles Hansel, C. E., 43 Exchange Pl., New York, has worked out the engineering details. The location selected for the union station proper is on the north side of the Third St., between Walnut and Main Sts., 400 × 200 ft., with a wide arcade approach from Fourth St., the principal business street of Cincinnati, and with a concourse extending south to accommodate 14 or more tracks. The train sheds will extend 1,000 ft. east and 1,000 ft. west from the concourse, clearing Third St. by an elevated structure. There will also be an elevated structure for the trains entering the city from the west. Trains from the east, including the Pennsylvania, will approach the station on independent tracks. The station will give entrance to four interurban lines. The establishment of an office building in connection with the union station will furnish office facilities for the railroads, exhibit space for manufacturers, as well as provide accommodations for various other interests that are more or less related to the railroads. Five blocks of stores and warehouses are to be erected under the elevated structure, which forms a part of the terminal system, and this will tend to simplify the freight delivery and cartage difficulty of a very hilly city and furnish quarters for a large amount of business that is now flooded during the periods of high water when the Ohio River overflows its banks. Noted last week.

*CINCINNATI, OHIO.—Bids are asked by Lt.-Col. J. G. Warren, Corps Engrs., U. S. A., until 2 p. m., June 15, for constructing an office building at Dam No. 37, Ohio River.

LA FAYETTE, IND.—Plans and specifications are being prepared for the proposed high school building, to cost $250,000.

*COLUMBUS, IND.—Bids are asked by Jas. Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., June 20, for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Columbus, Ind.

BLUFFTON, IND.—Bids are asked by the School Board until June 2 for the erection of a central school building. Charles Houck is Arch.

GWYNVILLE, IND.—COLVIN & ANDERSON have been awarded a contract to erect a high school building at this town.

WARSAW, IND.—MOTTO & SON, of Warsaw, have secured a contract for a new 6-room schoolhouse here.

DELRAY, MICH.—Harry J. Rill, Buhl Block, Detroit, is preparing plans and specifications for a 1 and 2-story church and school, 165 × 77 ft., for St. Johns Cantius Roman Catholic Church, Rev. Fr. John Walczac, Rector, Delray, Mich. Cost, $50,000. Brick, Bedford stone, hardwood finish and floors and electrical fixtures will be used in construction.

DETROIT, MICH.—Albert Kahn and E. Wilby, Archs., Trussed Concrete Bldg., Detroit, are taking figures for a warehouse, six stories and basement, 77 × 120 ft., for Joseph Boyer, 637 Woodward Ave., Detroit. Reinforced concrete, composition roof, metal skylight, structural iron, and electric fixtures will be used in construction. Estimated cost, $60,000.

The Common Council of Detroit has made appropriations for library sites as follows: Main Library, $300,000; and for five branch libraries, $50,000. Ralph Phelps, Jr., is Secy. Bd. of Libraries, Butler Bldg.

J. Lawson Miller, 15 Goebel Bldg., Detroit, has prepared plans and specifications for an addition to the building occupied by the Sisterhood of St. Vincent, Miss Helen Ryan, Secy., 262 15th St., Detroit. Stock brick, Bedford cut stone, tin roof and electric fixtures will be used in construction.

The 7-story and basement department store, 60 × 100 ft., of Hunter & Hunter, 177 Woodward Av., Detroit, was totally destroyed by fire on April 18. Estimated cost of building, $150,000. Donaldson & Meier, Archs., Penobscot Bldg., will probably prepare plans for a fireproof building for the same location, for the Fowler Estate, Arthur Flemming, Agent, Pasadena, Cal.

DETROIT, MICH.—George D. Mason, Arch., 80 Griswold St., Detroit, has let the following contracts for the 5-story office building for the Baldwin Estate, Bank Chamber, Detroit: Masonry, to A. A. ALBRECHT CO., Penobscot Bldg.; carpentry, to GEORGE W. GOLDEN, 15 Gilman St.; marble work, to CHRISTA MARBLE CO., 492 Lafayette Ave.; plastering, to FRITCH & SCRESE, 260 Helen Ave.

B. C. Wetzel & Co., Hammond Bldg., Detroit, have prepared plans and specifications for a 2-story automobile garage, 95 × 100 ft., for the Goodfellow Tire Co., Majestic Bldg., Detroit. Construction will be of stock brick, Bedford stone, with composition roof, metal skylight, structural iron and electrical fixtures.

The First Presbyterian Church, Rev. John H. Boyd, D. D., Pastor, 89 Watson St., Detroit, has decided to erect a building for social purposes in the rear of the church at Edmond Pl. and Woodward Ave., at an estimated cost of between $50,000 and $60,000. Clarence A. Black is Chn. Bldg. Com., Penobscot Bldg.

Harley & Atcheson, 504 Bolles Bldg., Detroit, have prepared plans and specifications for an automobile exhibition building, two stories, 123 × 272 ft., for the Michigan State Agricultural Society, Bolles Bldg. Paving and stock brick, cement stucco, composition roof, galvanized iron cornice, structural iron, hardwood finish and floors and electric fixtures will be used in construction. Cost, $40,000.

The same architects are preparing plans and specifications for an administration building, two stories, 50 × 80 ft., for the Michigan State Agricultural Society, Bolles Bldg., Detroit. Construction will be of stock brick, cement stucco, with stained shingle roof, hardwood finish and cement floors and electrical fixtures.

BENTON HARBOR, MICH.—Edwin L. Downs, 9 Jackson Boulevard, Chicago, Ill., is taking figures on a 2-story bank and office building, 127 × 154 × 104 ft., for the Benton Harbor State Bank, of Benton Harbor, Mich. The building will contain bank chambers, five stores and 32 offices and will cost $40,000. Bedford stone on two sides, buff pressed brick, mill construction, except bank proper, which will be fireproof, structural iron, composition roofing, galvanized iron skylight, mahogany finish, tile and maple floors and electric fixtures will be used in construction.

CHICAGO, ILL.—Chickering Bros. will build a 7-story building to be used for the manufacture of pianos at the northwest corner of South Park Ave. and 23d St., the site fronting 100 ft. on South Park Ave. and 179 ft. on 23d St. Robert T. Newberry, Arch., The Temple, is at work upon plans for the building, the cost of which is estimated at about $125,000.

APPLETON, WIS.—Bids were received as follows on May 12, by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office building at Appleton, Wis.: G. Maffioli & Sons, Rockford, Ill., $65,000; Northern Construction Co., 421 Milwaukee St., Milwaukee, Wis., $73,764; General Construction Co., Hathaway Bldg., Milwaukee, Wis., $67,738; J. L. Simmons, Chicago, $68,000; Ashman & Wildhagen, Appleton, Wis., $71,880; Conners Bros. Co., Lowell, Mass., $72,600; Lange & Hoffman, Appleton, Wis., $73,550; Hockworth Construction Co., Appleton, Wis., $69,500.

DES MOINES, IOWA.—Bids are asked by the Construction Q. M., Fort Des Moines, until 3 p. m., May 25, for the construction of the following buildings at Fort Des Moines, Iowa: One building for fire apparatus, one quartermaster's stable, one hay shed, one coal shed and one shop building, including plumbing, electric wiring and fixtures, where specified.

OTTUMWA, IOWA.—Bids were received as follows on May 13 by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office building at Ottumwa, Iowa: Northwestern Construction Co., Wahpeton, N. Dak., $191,000; J. S. Simmons, Chicago, $220,386; Northern Construction Co., 421 Milwaukee St., Milwaukee, Wis., $215,300; Paul Riesen's Sons, Milwaukee, Wis., $205,777; General Construction Co., Hathaway Bldg., Milwaukee, Wis., $197,900; J. H. Wiese, South Omaha, Neb., $198,960; Bartlett & Kling, Inc., Cedar Rapids, Iowa, $189,900; Charles W. Peckworth, 415 Hudson St., New York, $194,626; Conners Bros. Co., Lowell, Mass., $227,850; J. E. & A. L. Pennock, Land Title Bldg., Philadelphia, $198,840.

ST. PAUL, MINN.—Bids are asked by the city of St. Paul, D. W. Lawler, Mayor, until noon, May 26, for the construction of the proposed Galtier school. It will be two stories high, of fireproof construction, brick and cut stone, with steam heating and modern plumbing. P. J. Linhoff is Arch., St. Paul. Cost, $40,000.

The State Board of Control has awarded the contract for the general construction of the addition to the main building of the Walker State Sanitorium for Consumptives to NELSON & SHULIND, of Manomen, Minn., at $48,990. The Board has awarded the contract for the construction of the proposed Detention Hospital at the St. Peter Hospital for the Insane, to OTTO NEITGE, Mankato, Minn., at $58,240. The Board has still under consideration the bids for the construction of the fireproof working girls building to be built at the Faribault Minn. School for the Feeble-minded, the lowest bid being that of Kingsley & Payant, Faribault, at $32,744.

ROCHESTER, MINN.—James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., has awarded contract for the construction of a post-office building at Rochester, Minn., to the NORTHERN CONSTRUCTION CO., 421 Milwaukee St., Milwaukee, Wis., at $46,840.

OMAHA, NEB.—Bids are asked by Capt. F. C. Bolles, Q. M., Omaha, until 1 p. m., June 11, for installing two electric freight elevators in storehouse at Omaha D.

*FORT D. A. RUSSELL, Wyo.—Bids are asked by Capt. V. K. Hart, Q. M., Cheyenne, Wyo., until 9.30 a. m., June 8, for the construction, heating, etc., of the following public buildings at Fort D. A. Russell, Wyoming, viz.: (1) For construction, plumbing, heating, electric wiring and electric fixtures, for one quarters for four civilian employees; (2) for construction, plumbing, electric wiring and electric fixtures, for one quartermaster's stable, and two stables; (3) for construction, electric wiring and electric fixtures, for one double stable guard and shop building; (4) for construction only, for one wagon shed; (5) for the installation of steam heating systems complete and alterations in construction, of Barracks Nos. 35, 36, 37, 39, 40, 42, 43 and 44, post plans, and Officers' Quarters Nos. 29 and 30 post plans.

SPRINGFIELD, MO.—The contract for the erection of a passenger station, to cost $45,000, has been let by the Missouri Pacific to MURCH BROS. CONSTRUCTION CO., Odd Fellows' Bldg., St. Louis. The contract calls for the beginning of the work at the earliest possible date and its completion within less than six months.

GEORGETOWN, TEX.—A $250,000 memorial building is to be erected by the Southwestern University at Georgetown, according to the Houston (Tex.) "Post." The building will be of steel and white stone construction.

SAN ANTONIO, TEX.—Announcement has been made that a 5-story brick building to cost about $50,000 will be erected at 310 East Commerce St., by T. W. Campbell, Mrs. Harry Gunther and W. A. Wurzbach. Leo M. J. Dielmann is Arch., 306 East Commerce St. The upper stories will be an apartment house and the lower floor will be for stores. The building will front 56.5 ft. on East Commerce St. and will run back 91 ft. This property is occupied by a small brick building. Work will begin within 30 days.

HOUSTON, TEX.—Plans for a building for the Tabernacle Methodist Church, to be erected on the site at Crawford St. and Gray Ave., are being prepared by Pigg & Shoemaker, Archs., and work on the structure will be begun Sept. 1. The plans in course of preparation call for the erection of a 3-story brick building upon a plot of ground 120 ft. square. This building will be provided with cement floors, making it semi-fireproof. The first floor, auditorium and balcony combined will have a seating capacity of 1,500. There will be three Sunday school rooms for the primary, intermediate and senior departments. These will be so arranged that while they will not open into each other, they can be made to open into the auditorium proper, which will increase the seating capacity of the church by about 1,000 or 1,200. Upon the second floor of the building there will be apartments for the pastor, and adjoining these rooms, but separated by a heavy brick wall, will be a gymnasium, 35 × 50 ft., fully equipped with shower baths, lockers, reading and game rooms. On this floor will also be the church parlors, dining room, kitchen and pantries. Provision will be made for an auditorium with a stage for Sunday school entertainments, lectures or other social functions. Upon the third floor will be dormitories. Rev. W. W. Watts is Pastor. Members of the Building Committee include E. C. Lamb, Chn., J. M. Rockwell, F. C. Bering, Joseph F. Meyer, J. D. Alexander, Bruce Ferguson, Nat F. Davis, W. A. Lang, Joe Green and J. V. Dealy. Cost, $75,000.

SULPHUR, OKLA.—Charles W. Sudhoelter, Arch., of Muskogee, Okla., will erect a building for the Deaf and Dumb school at Sulphur. The buildings will cost $100,000, and the Board of Regents, at Guthrie, Okla., is considering plans and specifications.

DENVER, COLO.—About $1,500,000 will be the investment in the two office buildings which are planned for the Stratton Estate corner, at 17th and Welton Sts., upon which property a syndicate of Denver men has secured a 99-year lease and are ready to begin building operations soon. The Stewart Realty Co. is the firm which is to take over the lease from the Stratton Estate and erect the buildings, and the personnel of the firm is as follows: James C. Stewart, of St. Louis, who is the contractor erecting the First National Bank building at 17th and Stout Sts. J. M. Wright, a local operator in real estate and mines; F. E. Edbrooke, Arch., Opera House Block; John McDonough, real estate dealer; James H. Peabody, former Governor of Colorado. According to the Denver "Post," two separate structures, immediately adjoining each other, are planned for the property. On the five corner lots at 17th and Welton Sts. will be a 12-story office and bank building of steel and concrete construction. The ground floor will be arranged for a bank and trust company and safety deposit vaults, while the eleven upper floors will be devoted to offices. This building will cost about $850,000. On the six inside lots will be placed a 10-story modern building designed for a theater and hotel, with some of the floors devoted to offices. This building will cost about $650,000 and will carry out the architectural lines of the bank structure on the corner.

FORT BAYARD, N. MEX.—Bids are asked by Lieut. C. C. Winnia, Const. Q. M., until 11 a. m., May 28, for the complete construction, plumbing, heating, electric wiring and electric light fixtures for one set of field officers' quarters and three sets of company officers' quarters.

NORTH YAKIMA, WASH.—John J. Miller will erect a 5-story $100,000 building on a site on East Yakima Ave., between Third and Fourth Sts.

SPOKANE, WASH.—FRED PHAIR has been awarded the contract for building a $150,000 Spokane Club building, to be erected on the northwest corner of Monroe St. and Riverside Ave.

PORTLAND, ORE.—The Hawthorne Estate will erect a 3-story modern brick building at the corner of East Third and Belmont Sts., 100 x 100 ft., to cost $50,000, plans for which are now being prepared by Rae & McFarland, Archs.

The 5-story department store building which is being completed on the block between Morrison, Tenth, Alder and West Park Sts. for Olds, Wortman & King is to be increased by five additional stories. Doyle & Patterson, Worcester Bldg., are Archs.

Within one month the work of tearing down the old frame Marquam building at the southwest corner of Sixth and Alder Sts. will be started, and erection of a 12-story structure will be under way. This is the building to be erected by Ben Selling and associates at a cost of $400,000. It has been decided definitely to make the building a 12-story structure instead of ten stories as at first planned. This will also increase the initial estimated cost from $350,000 to $400,-000. The building will be 70 × 125 ft. and owing to the alleyways in the rear and on a large part of the side, will be built so as to occupy the entire lot, no light court or light well being necessary to furnish outside light and ventilation to every room in the building. It will be a steel structure faced with cream Norman brick with white mortar joints and cream-glazed terra cotta trimmings. Doyle & Patterson, Worcester Bldg., are Archs., and have designed a structure which will be fireproof. The terra cotta trimming will be carried up to the top of the third story, and will also be placed on the two top stories. There will be six stories facing Sixth St. The main entrance will be finished in solid marble wainscoting, bronze work and ornamental plaster ceilings. The floor of the entrance lobby will be inlaid decorative tiling. There will be three electric high-speed elevators for passengers. All the corridors will be finished with marble wainscoting with tiled floors. The top five floors will be fitted for doctors and dentists. There will be 22 large offices on each of the upper floors, these being so arranged that they can be subdivided into smaller offices at the convenience or wish of the tenants. Those who will erect this building are Ben Selling, Fourth and Morrison Sts., Portland; C. S. and R. S. Moore, of Klamath Falls, and M. Blum, of San Francisco.

LOS ANGELES, CAL.—The F. O. ENGSTROM CO., 451 Colyton Ave., has been awarded contract for erecting the State Exposition Building at Agricultural Park. The amount was $174,359. The main building will be 324 × 65 ft., with wings on each end, 61 × 90 ft.; practically two stories in height; steel interior frame steel roof trusses, concrete foundation, reinforced concrete floors and stairs, tapestry, brick facing, terra cotta trimmings, clay tile roof, composition decks, galvanized iron skylights with wired glass. There will be a rotunda in center of building with balcony and an art glass dome, floors and stairways in lobby, marble, walls, imitation of Caen stone. Other bids were: Richards-Neustadt Construction Co., Los Angeles, $176,655; the Johns Roberts Co., $184,-720. The sum of $250,000 was appropriated for the work complete.

The Bilicke-Rowan Fireproof Building Co., owners, Parkinson & Bergstrom, Archs., Security Bldg., have awarded the following contracts for work on the proposed 12-story addition to the Alexandria Hotel, Fifth St. and Broadway: C. J. KUBACH CO., Pacific Electric Bldg., brick work, masonry, fireproofing, plastering, etc., at $212,700; electric wiring to FOULKES-GAYLORD CO., Security Bldg., at $16,500; elevators to LLEWELYN IRON WORKS, at $25,000; marble and tile work to B. V. COLLINS, 928 South Main St., at $32,500.

LOS ANGELES, CAL.—Fred. R. Dorn, Arch., Douglas Bldg., is preparing plans for an 8-story and basement hotel building to be erected on Eighth St. by Robert Marsh & Co. The building will be 35 × 95 ft., fireproof concrete construction, with enamel brick facing, hollow tile partitions.

SAN JOSE, CAL.—C. B. Ripley, Arch., Central Bank Bldg., is preparing plans for a $45,000 church for the First M. E. Church. It will have plastered exterior, Spanish tile roof and steam heat.

VALLEJO, CAL.—Bids were received as follows on May 14 by R. C. Hollyday, Ch. of Bureau of Yards and Docks, Navy Dept., Washington, D. C., for the construction of an ordnance storehouse at the Mare Island Navy Yard: E. D. Crowley Co., 127 Montgomery St., San Francisco, $104,400; Grant Fee, Monadnock Bldg., San Francisco, $115,-000; Pringle, Dunn & Co., 388 Pine St., San Francisco, $105,830; W. N. Concannon Co., Monadnock Bldg., San Francisco, $98,849; Snare & Triest Co., 143 Liberty St., New York, $110,890.

SAN FRANCISCO, CAL.—The Sisters of Mercy have received plans prepared by D. H. Burnham & Co., Archs., Merchants' Exchange, San Francisco, for a structure to cost, it is stated, about $227,837, and to stand on a lot 275 × 412.6 ft. at the northeast corner of Hayes and Stanyan Sts.

Plans for a Class A 5-story labor temple, to cost $200,000, were formally launched at a meeting of the Labor Building Association at the Labor Temple, 14th and Mission Sts., recently. A committee of five was appointed to secure an immediate option on a lot, and a bonding scheme of procedure will be organized at once to supply the funds for the new edifice. J. McCabe is Secy.

MONTREAL, QUE.—We are officially advised that the TURNER CONSTRUCTION CO., 11 Broadway, New York, N. Y., has been awarded the contract by the Dougall Varnish Co., Montreal, for the erection of a building 83 × 32 ft., three stories and basement in height. This building is to be of reinforced concrete and will be used for offices. Work to be started at once.

OTTAWA, ONT.—John G. Foster, U. S. Consul-General at Ottawa, reports it is the announced intention of the Department of Public Works to begin the construction of a large departmental building during the coming summer. The building will have a length of 590 ft. and a width of 250 ft. It will have six stories and a basement on one side and seven stories and a basement on the other frontage. It will be built of stone, and will have a total superficial area of 596,430 ft. and a total net office area of 350,-000 ft. It is estimated that the cost will be $3,439,200, exclusive of the land. The site has been purchased at a cost of about $600,-000, making the expected cost of the building and site over $4,000,000. Bids for the building will probably be called for this month or in June.

TORONTO, ONT.—Bids will be received by E. J. Lennox, Arch., 164 Bay St., Toronto, until May 28, for the erection of a steel constructed fireproof warehouse building for Hobberlin Bros. & Co. at the corner of Yonge and Richmond Sts.

Contracts totaling $142,762 have been awarded by the Board of Education for the Oakwood High School, divided among JAMES CRANG, for masonry, $73,548; M. HUTCHINSON, for carpentry, $24,985; A. GARDNER, for reinforced concrete, $11,040.

HAILEYBURY, ONT.—Bids will be received until May 26 by J. H. Shibley, Secy.-Treas. High School Board, Haileyburg, for the erection of a high school in the town.

WINNIPEG, MAN.—Albert Johnson, of Winnipeg, will have plans prepared for an apartment block to be erected on Notre Dame Ave. and Sargent St., at the cost of $45,000.

WATER-SUPPLY—IRRIGATION.

(** denotes that this work is advertised in Engineering News.*)

FORT WILLIAMS (Cape Cottage post-office), ME.—Bids will be received until June 4 by Capt. C. F. Humphrey, Jr., Constructing Q. M., U. S. A., Portland, for constructing additions to the water and sewer systems at Fort Williams.

WOBURN, MASS.—The city proposes to expend this year about $20,000 for new water mains. William B. Jones is City Engr.

NEWTON, MASS.—Bids will be received until May 25 by the Metropolitan Water and Sewerage Board, 1 Ashburton Pl., Boston, for laying 8,830 ft. of 60-in. c.-i. water pipe in Newton. Dexter Brackett is Ch. Engr.

NEW YORK, N. Y.—Bids are asked until 2 p. m., May 25, by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, for furnishing, delivering and laying water mains in Mosholu Parkway, at intersection with Jerome Ave.; in Jerome Ave., between Mosholu Parkway South and 500 ft. south of same, and in city property north of and adjacent to the Jerome Ave. pumping station, and removing existing water mains within the above described territory; also for furnishing, delivering and laying a 48-in. water main in 204th St., from end of present main, near Valentine Ave., to Mosholu Parkway South; in Mosholu Parkway South, from 204th St. to Webster Ave., and in Webster Ave., between Mosholu Parkway South and 201st St.

NEW YORK, N. Y.—Bids were received as follows on May 11 by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, for furnishing, delivering and laying high pressure fire service mains and appurtenances in the Gowanus and South Brooklyn districts: Cranford Co., 52 Ninth St., Brooklyn, $497,697; Michael J. Dady, $625,042; Haggerty & Drummond, 280 Broadway, $537,338; F. V. Smith Contracting Co., $557,062; Murphy Bros., $555,217; James H. Holmes, $523,974.

YOUNGSTOWN, N. Y.—Contracts have been awarded as follows by the city for the water-works plant: General contract, to F. E. DEAN & CO., of Youngstown, $4,789; erection of pumping station, to A. J. SERVISS & SON, Youngstown, $1,656; furnishing pipe for entire system, to U. S. CAST IRON PIPE & FOUNDRY CO., of Buffalo, $6,728; standpipe, to TIBBETT & WOOD, of Philipsburg, N. J., $2,891; hydrant, valves and valve boxes, to DARLING PUMP MFG. CO., of Williamsport, Pa., $1,225.

NORTH TONAWANDA, N. Y.—Bids are asked until 8 p. m., May 31, by Moss W. Simson, City Clk., for constructing concrete flue and cement curbing at Tonawanda pumping station.

UTICA, N. Y.—Contract for water piping for fire protection at Utica State Hospital has been awarded to JOHN M. HOLLER, 452 Broadway, Albany, at $4,396.

*WILLARD, N. Y.—The State Commission in Lunacy, Albany, has awarded contract for water tower and piping for fire protection at the Willard State Hospital to the DES MOINES BRIDGE & IRON CO., of Des Moines, Iowa.

MONT ALTO, PA.—Contract for constructing the extension to the water-works of the Pennsylvania State Mountain Sanatorium at Mont Alto, bids opened on May 2, including pipe, two pumps, two engines, pump house, etc., has been awarded to the PITT CONSTRUCTION CO., 82 Fulton Bldg., Pittsburg, at $19,967. All bids received for the steel tank were rejected.

MOUNT JOY, PA.—The Council has decided to purchase 1,200 ft. of 4-in. pipe for the extension of the water mains in David St., and Lombard and Detweiler Aves.

FALLSTONE, MD.—The BALTIMORE COOPERAGE CO., 37 South Howard St., Baltimore, has been awarded contract for constructing water-works for the Children's Fresh Air Farm.

BALTIMORE, MD.—Contract for the erection of the superstructure of the gate-house at the high-service reservoir was awarded on May 11 by the Board of Awards to P. J. CUSHEN, at $11,927.

CLARKSBURG, W. VA.—Bids will be received by the Water-Works and Sewerage Board, Scott G. Highland, Secy., until June 15 for a mechanical filter with appurtenances; also for furnishing and laying c.-i. water pipe, valves and appurtenances. Hering & Fuller, 170 Broadway, New York, are Engrs.

WILLIAMSTON, S. C.—The city will spend $20,000 for water-works and sewerage systems. E. C. Horton is interested.

GAFFNEY, S. C.—The city will spend $125,000 for water-works and sewerage construction. W. W. Lyon is Consulting Engr., Augusta, Ga.

SPARTA, GA.—The city has voted $40,000 of bonds for water-works. Walton & Wagner, Engrs., 418 Empire Bldg., Atlanta, Ga.

CAIRO, GA.—The citizens have voted to issue $9,000 of bonds for extensions to the water-works. U. A. Clifford, of Cairo, is Engr.

EUSTIS, FLA.—The Eustis Water, Light & Power Co. has awarded contract to WALTON & WAGNER, 418 Empire Bldg., Atlanta, Ga., for engineering and constructing the water-works system.

BREAUX BRIDGE, LA.—The Mayor and Aldermen on May 3 awarded the following contracts for water-works: To U. S. CAST IRON PIPE & FOUNDRY CO., 71 Broadway, New York, pipe, $28.30 per ton, specials, $55; the FAIRBANKS CO., valves and hydrants; the R. D. COLE MFG. CO., Newman, Ga., tower and tank, $3,595; PLATT IRON WORKS CO., Dayton, Ohio, pump and boiler feeders, $1,534; WALSH & WEIDNER BOILER CO., Chattanooga, Tenn., boilers and steel setting, $1,769; AHRENS & OTT MFG. CO., New Orleans, La., lead, hemp and general supplies. A. C. Jones, of Opelousas, La., is Engr.

MOUNT PLEASANT, TENN.—Bids are asked until June 1 by the city for material and construction of a gravity water-works system. Bonds for $40,000 have been sold. Granberry Jackson, C. E., 1021 Stallman Bldg., Nashville, Tenn., is Engr.-in-Charge.

SPRINGFIELD, OHIO.—Bids will be received by William Mahoney, Clk. Bd. Pub. Ser. until noon, May 20, for 100 tons of 6-in. c.-i. water pipe.

NOTTINGHAM, OHIO.—On May 9 the citizens voted to issue $15,000 of bonds for extending the water mains throughout that portion of the village not now covered by the water system.

CANAL DOVER, OHIO.—We are officially advised that bids will soon be asked by the city for water-works extension. George W. Arnold is City Engr.

CLEVELAND HEIGHTS, OHIO.—Bids are asked by H. H. Canfield, Village Clk., until noon, June 14, for laying a 6-in. water main in Maple Road.

BLOOMINGTON, IND.—John W. Cravens, Secy. Trustees Indiana University, will receive bids until May 22 for the construction of a dam for a water-works system. Bids will be received in four forms as follows: (1) For a concrete dam complete; (2) for a concrete dam by cu. yd.; (3) for an earthen dam with concrete core, complete; (4) for an earthen dam with concrete core, per cu. yd. of earth and concrete.

ESSEXVILLE, MICH.—Bids will be received by Carl S. Sharpe, Village Clk., until May 23 for furnishing 375 tons of c.-i. pipe and special castings, hydrants and valves; also for laying about 20,000 ft. of 6 and 8-in. pipe. J. H. Blomshield is Engr., Bay City.

HANCOCK, MICH.—Bids were opened on May 2 by the Board of Public Works for constructing reinforced-concrete reservoirs. Contract has been awarded to WICK, O'CONNELL & CO., of Houghton, at the following bid (prices include furnishing as well as placing all steel listed, except c.-i. water pipe, which will be furnished by the city): 2,025 cu yds. excavation, 37 cts.; 500 cu. yds. concrete, $10; 124,000 lbs. steel, 3.6 cts.; 600 lbs. iron trap door, 7 cts.; 64 lin. ft. ladders, $1.25; 200 cu. yds. waterproofing, $2; 20 lin. ft. c.-i. pipe, 10-in., 75 cts.; 100 lin. ft. c.-i. pipe, 8-in., 75 cts.; 100 lin. ft. c.-i. pipe, 6-in., 75 cts. Total, $10,363. Other bids were: A. W. Anderson & Son, Houghton, $13,730; P. Beeman, Houghton, $11,274; Stroyle & Michels, Houghton, $14,391; Verville Bros., Hancock, $12,057.

DE KALB, ILL.—Bids will be received by A. R. Russell, City Engr., until May 21st for furnishing approximately 3,900 ft. of 12-in. standard c.-i. water pipe with necessary standard fittings.

*DANVILLE, ILL.—Bids for furnishing work and material for the reconstruction of the concrete dam for the improvement of the water-works of the Danville Water Co., for the City of Danville, will be received at the office of the water company at Danville, until noon, June 3. D. W. Mead is Consulting Engr., 401 State St., Madison, Wis.

CHEROKEE, IOWA.—SWANSON & BOSWORTH, of Cherokee, have secured contract for laying 1,000 ft. of 6-in. pipe at 84¾ cts. per ft., and for laying 2,200 ft. of c.-i. pipe at 69½ cts. per ft. Bids were opened on May 3.

CALEDONIA, MINN.—We are officially advised that the village has awarded contract to the KEYSTONE DRILLER CO., Monadnock Block, Chicago, Ill., for installing a large size Downie double-stroke deep well pump, which is intended to be placed in the new well recently drilled to the depth of 405 ft.

ST. PAUL, MINN.—The Board of Water Commissioners, John Caulfield, Secy., has decided to reject all bids for dredging Vadnais Lake, the principal source of the city's water supply. The lowest bid was that of the La Crosse Dredging Co., of La Crosse, Wis., at $134,000.

AUSTIN, MINN.—We are officially advised that bids will soon be asked by the city for additions to the water-works. M. N. Clausen is City Engr.

HAVELOCK, NEB.—Bids will be received until June 7 by C. A. Curie, City Clk., for constructing extensions to the water-works. Grant & Letton are Engrs., F. & M. Bldg., Lincoln, Neb.

FORT MISSOULA, MONT.—Bids will be received by Maj. A. B. Shattuck, Constructing Q. M., U. S. A., until June 6, for a water distributing system, 300,000-gallon steel tank and 100-ft. trestle, pumping station, boilers, pumps, valves, etc.; also for a sewer system.

FORT KEOGH, MONT.—Bids are asked by Capt. H. P. Howard, Q. M., U. S. A., until 1 p. m., May 20, for three 4-in. and one 6-in. artesian well.

FORT LOGAN H. ROOTS, ARK.—Bids will be received by the Constructing Quartermaster until June 6 for the erection of a 150,000-gallon steel tank.

*ATHENS, TEX.—Bids are asked by the city until June 8 for material for the construction of complete water-works system including pipe, valves and hydrants, tank and tower, water-works pumps, air-compressor, boilers, feed-water heater and boiler feed-pump. Specifications may be had by addressing O'Neil Engineering Co., Dallas Tex. The date for opening bids for this work is erroneously stated as May 30 on Advertising Page No. 53c.

BRYAN, TEX.—See item under Light and Power Plants.

O'KEENE, OKLA.—The city has awarded contract to the SOUTHWESTERN ENGINEERING CO., of Oklahoma City, Okla., for the construction of water-works. Estimated cost, $30,000. Archer & Rollins, Kansas City, Mo., are Engrs.

*MOUNTAIN VIEW, OKLA.—All bids opened on May 4 for the materials and also for the purchase of bonds for water-works, sewers and electric light plant have been rejected. Bonds are still for sale. O'Neil Engineering Co., Dallas, Tex., are Engrs.

*FORT SILL, OKLA.—Bids will be received until June 10 by Capt. David L. Stone, Constructing Q. M., U. S. A., Fort Sill, for constructing a 500,000-gallon reservoir, a sewage purification plant, and a steel highway bridge across Cache Creek, all at Fort Sill.

LAS ANIMAS, COLO.—The Bent County Reservoir & Canal Co. on May 10 awarded contract to the KAW CONSTRUCTION CO., of Kansas City, Mo., for the construction of an irrigation system for 20,000 acres adjoining Las Animas. This will impound Rule and Muddy Creeks and have a 50-ft. dam. About 25 miles of canal will be built. The system well cost $800,000 and is to be finished in the spring of 1911.

NORTH YAKIMA, WASH.—The Secretary of the Interior has rejected as unsatisfactory all bids received for the excavation of 40 miles of sublaterals on the Cowiche-Yakima branch of the Tieton unit, Yakima irrigation project, Washington, and has authorized the Reclamation Service to undertake this work by force account.

COTTAGE GROVE, ORE.—Bids are about to be asked for the construction of the proposed gravity water system, to include about 20 miles of pipe. Estimated cost, $100,000. W. J. Roberts, of Medford, is Engr.

MEDFORD, ORE.—The City Council has awarded to the JACOBSON-BADE CO., of Portland, Ore., contract for laying six miles of water main which will give the city a distributing water system consisting of over 25 miles of water mains. A gravity system brings the water through a pipe line extending 25 miles up into the Cascade Mountains.

IMPERIAL, CAL.—The City Trustees are planning a pipe line from the Brawley main canal to the city reservoirs for the new municipal water supply. Estimated cost, $10,000.

SALT LAKE CITY, UTAH.—Articles of incorporation of the Extension Middle Chalk Creek Irrigation Co. were filed with the Secretary of State on May 5. The officers are: James B. Rhead, Pres.; David Ross, Vice-Pres., and Walter Boyden, Secy. and Treas. The object of the company is to provide water for the irrigation of land near Coalville, Summit County.

BOISE, IDAHO.—Bids will be received at the office of the Department of the Interior, U. S. Reclamation Service, until July 8, for enlargement of the main south side canal, Payette-Boise irrigation project, Idaho. This work involves the excavation of about 342,000 cu. yds. of material, and the time of the completion of the contract is April 1, 1912. The bids will be opened at the office of the Reclamation Service, Boise, where specifications are available.

SEWERS.

(** denotes that this work is advertised in Engineering News.*)

FORT WILLIAMS (Cape Cottage post-office), ME.—Bids are asked until 10 a. m., June 4, by Capt. C. F. Humphrey, Jr., Constructing Q. M., U. S. A., for additions to the sewer system.

FITCHBURG, MASS.—The Governor has signed the sewer bill, which provides for the appointment by the Mayor of a sewer committee to have charge of constructing sewage disposal system, drains and sewers.

FORT MANSFIELD, R. I.—Bids will be received by Capt. F. T. Arnold, Constructing Q. M., U. S. A., until May 30 for 1,000 lin. ft. of sewers at Fort Mansfield.

PROVIDENCE, R. I.—F. E. SHAW, 75 Westminster St., has secured contract for constructing ten sections of sewer in Blackstone Boulevard, Sassafras, Woodman and other streets, at about $16,312.

NEW HAVEN, CONN.—Bids will be received until 2 p. m., May 23, by C. W. Kelly, City Engr., for constructing sewers and appurtenances in State, Rock, Truman, Highland, Chatham and Pond Sts.

LONG ISLAND CITY (L. I.), N. Y.—Bids are asked until 11 a. m., May 26, by Lawrence Gresser, Pres. Boro. of Queens, for constructing sewers and sewer basins and appurtenances in various streets.

BROOKLYN, N. Y.—Bids are asked until 11 a. m., May 25, by Alfred E. Steers, Boro. Pres., for furnishing all the labor and material required for constructing sewers in Malta St., between Wortman Ave. and Fairfield Ave.; in Fairfield Ave., between Malta St. and Van Sicklen Ave., and in Van Sicklen Ave., between Fairfield Ave. and the 26th Ward disposal works, situated between Fairfield Ave. and Vandalia Ave.

BROOKLYN, N. Y.—The following bids were opened on May 4 at the office of Alfred E. Steers, Boro. Pres., for sewer work. Bids were submitted on the percentage basis: (a) Malta St., Fairfield and Van Sicklen Aves., estimated cost $70,665; (b) Gravesend Ave. and Cortelyou Road, etc., estimated cost $28,453; (c) 86th St. and other streets, estimated cost $24,826: Chester A. Dady, Brooklyn, (a) 112%, (b) 107.22%; J. J. Creem, Brooklyn, (a) 224%; Newman & Carey, Brooklyn, (a) 179½%, (b) 110.56%, (c) 99.72%; I. H. Holmes, Brooklyn, (a) 197%; Beaver Engineering & Construction Co., 41 Park Row, New York, (a) 160%; L. E. Kelly, Brooklyn, (b) 114.9%, (c) 110%; Vachares & Galardi, Brooklyn, (b) and (c) 96%; Donegan-Redmond Co., Brooklyn, (b) 91%, (c) 94%; Mutual Construction Co., Brooklyn, (b) 91.5%, (c) 96%; Empire City Construction Co., 56 Park Row, New York, (c) 88.5%; T. Menidino, Brooklyn, (c) 96.83%; Murphy Bros., Brooklyn, (a) 98.7%; W. H. Robertson, Brooklyn, (c) 91.7%.

NEW YORK, N. Y.—Bids are asked by Cyrus C. Miller, Pres. Boro. of The Bronx, until 11 a. m., May 26, for furnishing and delivering lumber to the Bureau of Sewers.

COMSTOCK, N. Y.—C. V. Collins, Supt. State Prisons, Albany, has awarded contract for sewage disposal system at the Great Meadow Prison, Comstock, to the HUDSON VALLEY CONSTRUCTION CO., 30 Fourth St., Troy.

FULTONVILLE, N. Y.—M. F. DOLLARD, of Albany, N. Y., has been awarded contract at $16,000, for the construction of sewers here.

MARGATE CITY, N. J.—Bids are asked until 2 p. m., May 19, by the City Council for the construction of sewerage system complete for a portion of Margate City. The work to be done is as follows: 54,000 lin. ft. of 8-in. terra cotta, 3,200 lin. ft. of 12-in. terra cotta, 1,500 lin. ft. of 15-in. terra cotta sewer pipe; 225 lin. ft. of 8-in. c.-i. pipe; two disposal plants; ten 8-in bends, five 12-in. bends, five 15-in. bends, twenty 8-in. by 6-in Ys., five 15-in. by 6-in. Ys., five 15-in. by 6-in. Ys. Charles Hart is City Clk.

•BALTIMORE, MD.—We are officially advised that bids were received by the Board of Awards at the office of J. Sewell Thomas, City Register, on May 4, for Contract 50, for constructing Sec. 2 of the Jones Falls interceptor. Approximate quantities are: 18,000 cu. yds. earth excavation in trench, 300 cu. yds. earth excavation in tunnel, 150 cu. yds. rock excavation, 650 cu. yds. embankment, 240 lin. ft. 24-in. diameter c.-i. pipe sewer, 375 cu. yds. brick masonry, 4,200 cu. yds. concrete masonry, 145,000 lbs. reinforcing steel, 16,000 lbs. structural steel, 150 M. ft. B. M. ordinary sheeting, shoring and bracing left in place. Contract was awarded on May 11 to the UNITED ENGINEERING & CONSTRUCTION CO., Baltimore, at $83,836. Calvin W. Hendrick is Ch. Engr., Room 904, American Bldg.

CHARLOTTESVILLE, VA.—We are officially advised that the city will lay about 15,000 ft. of sewer. E. T. Caruthers is City Clk.

HUNTINGTON, W. VA.—The city has voted $125,000 of bonds for sewer construction.

ST. PETERSBURG, FLA.—Contract for the construction of sewer system No. 12, bids opened on May 5, has been awarded to DOWMAN & HOXIE, of St. Petersburg.

MORRISTOWN, TENN.—Bids will be received by R. E. Smith, Secy. Sewer Bldg. Com., until 1 p. m., May 24, for furnishing material and laying complete about 8½ miles of sewers 6 to 24-in. diameter. Charles E. Collins, Drexel Bldg., Philadelphia, Pa., is Engr. Erroneously noted under Philadelphia, Pa., last week.

•CHATTANOOGA, TENN.—Bids are asked until 2.30 p. m., June 7 by the Board of Public Works for the erection of sewage pumping station. Separate bids will also be received for furnishing and installing two centrifugal pumps with electric motors, shafting and automatic starting and stopping devices. H. F. Van Dusen is Chn.

LEXINGTON, KY.—The city has awarded contract to JOSEPH MELVIN & CO., of Lexington, for constructing sanitary sewer in West Short St. John Skain is Mayor.

CLEVELAND, OHIO.—Bids are asked until 11 a. m., May 21, by the Board of County Commissioners for the construction of a sewer pipe in the Lake Road at Cahoon Hill, Dover Township, according to report No. 2599.

LORAIN, OHIO.—H. Y. BAXTER, 622 22d St., Lorain, has been awarded contract at $8,326, for the construction of a pipe sewer in this city. The work includes 300 ft. 24-in. pipe, 1,200 ft. 18-in. pipe, 2,000 ft. 15-in. pipe, 350 ft. 12-in. pipe, 330 ft. of 10-in. pipe, 20 ft. 8-in. pipe, and 300 ft. of 6-in. pipe, with lampholes, manholes, Ys and curves. Bids were opened on April 26.

The OHIO ENGINEERING CO., of Elyria, Ohio, has been awarded contract, at $9,926, for the construction of 1,800 ft. of 48 and 36-in. concrete pipe sewer.

NORWALK, OHIO.—Bids are asked until noon, June 1, by John E. Soisson, Dir. Pub. Ser., for constructing storm and sanitary sewers.

STEUBENVILLE, OHIO.—Bids are asked by the Board of Control until noon, May 23, for improvement of Seventh St., from Franklin Ave. to Stony Hollow Sewer, and the alley between Sixth Ave. (Stanton Boulevard) and Sycamore St., from Crawford Ave. to Buckeye St. and thence by the most practicable route to the Stony Hollow sewer by the construction of a sewer for storm and sanitary purposes. R. L. Freudenberger is Clerk.

ELGIN, ILL.—One bid was received and rejected by the city on May 5 by the Board of Local Improvements for the Villa St. sewer. The bid was that of Cook, Lund & Co., of Chicago, Ill., at $10,865.

ELGIN, ILL.—We are officially advised that contract for the construction of the Locust St. sewer has been awarded to SORENSEN, TETENS & JORGENSEN, of Elgin, at $7,448. Carl E. Plum is City Engr.

JOLIET, ILL.—WILLIAM MORAN, of Joliet, has been awarded contract, at $10,595, for the construction of the Hickory St. sewer.

OSHKOSH, WIS.—Contract for constructing 5,585 ft. of tile sewers, bids opened on April 20, has been awarded to J. RASMUSSEN & SONS CO., of Oshkosh.

WAUKON, IOWA.—We are officially advised that the date for receiving bids for the sewer system and disposal plant here has been extended from May 24 to June 1. Iowa Engineering Co., of Clinton, Iowa, are Engrs.

COLFAX, IOWA.—The City Council on April 28 awarded to the J. W. TURNER IMPROVEMENT CO., of Des Moines, contract for sewers at $9,400.

OSAGE CITY, KAN.—Bids are asked until 3 p. m., May 24, by W. C. White, City Clk., for furnishing material and constructing a complete system of sanitary sewers, including disposal plant. Burns & McDonnell, Scarrit Bldg., Kansas City, Mo., are Engrs.

ATCHISON, KAN.—WILLIAMS & SAMPLE have been awarded contract for the construction of the sewer in District "N," at the following bid: Plain concrete, $44,757; reinforced concrete, $44,655; lock joint, $44,910.

BALDWIN, KAN.—Bids will be received by the city until 7.30 p. m., May 24, for $33,000 of bonds for main sewer, lateral sewer and disposal plant. H. E. Downs is City Clk.

HAYS CITY, KAN.—Bids were opened on May 5 for the construction of sanitary sewers from the plans of the W. K. Palmer Co., Dwight Bldg., Kansas City, Mo. The following bids were received: (a) Sec. 1, (b) Sec. 2: L. H. Lyon, Salina, (a) $36,172, (b) $28,970; New State Paving & Construction Co., Tulsa, Okla., (a) $26,661, (b) $30,261; Katz-Craig Construction Co., Omaha, Neb., (a) $26,000, (b) $32,355; MIDLAND CONSTRUCTION CO., Fort Scott, (a) $29,490, (b) $28,109 (awarded contract); Bash & Gray, Joplin, Mo., (a) $27,792, (b) $30,558.

HAVELOCK, NEB.—Bids will be received until June 7 by C. A. Currie, City Clk., for constructing a system of sewers. Grant & Letton, 401 F. & M. Bldg., Lincoln, are Engrs.

ALLIANCE, NEB.—G. A. DUNLAP, Pres. Inter-Mountain Bridge & Construction Co., has been awarded contract for the construction of the laterals in Sewer Districts Nos. 15, 17, 18, 21, 22, 23, 26 and 33.

FARGO, N. DAK.—Bids are asked by E. R. Orchard, City Clk., until 5 p. m., May 23, for a 12-in. lateral sewer in Fifth St. North.

WARRENSBURG, MO.—The city is having plans prepared for a district sanitary sewer and septic tank. W. H. Sanders is City Engr.

•ST. LOUIS, MO.—Bids are asked by the Board of Public Improvements until June 21 for the construction of the River des Peres foul water sewer, second section. For details see advertisement in this issue.

CORPUS CHRISTI, TEX.—F. T. Lancashire of Corpus Christi will prepare plans and supervise the construction of a sewer system here. Estimated cost, $140,000.

AMARILLO, TEX.—See item under Streets and Roads.

BRYAN, TEX.—See item under Light and Power Plants.

FORT SILL, OKLA.—See item under Water Supply—Irrigation.

•WENATCHEE, WASH.—WETCHEL & FOSTER, of Spokane, have secured contract for constructing sewers, bids opened on May 3, as follows: 21,548 lin. ft. 8-in. pipe sewer (coarse gravel and boulders), $2.32; 16,366 lin. ft. 10-in., $2,302; 10,225 lin. ft. 12-in, $2.731; 1,773 lin. ft. 15-in., $3.134; 1,554 lin. ft. 18-in., $2.17; 2,056 lin. ft. 24-in., $5.297; 40,512 lin. ft. 6-in., with side connections, $1.278; 184 manholes, each $50; eight flush-tanks, each, $75; 74 catch basins, each $50. Total, $227,073. Other bids were: Coast Construction Co., Tacoma, $264,337; Thorsig & Miley, Everett, $23,312; J. B. Snyder, Everett, $243,700; M. C. Murphy Co., Spokane, $250,110.

INDEPENDENCE, ORE.—Bids are asked until 8 p. m., June 1, by W. S. Kurre, Recorder, for a complete sewer system here.

LA GRANDE, ORE.—We are officially advised that Louis C. Kelsey, Consulting Engr., 402 Dooly Bldg., Salt Lake City, has been selected as consulting engineer on the sewer system for La Grande. Estimated cost, $125,000.

RICHMOND, CAL.—The following contracts have been awarded for the construction of sewers: GEORGE W. CUSHING, Oakland, Cal., at $15,083 for sewer in Seventh St.; at $22,388 for sewer in Nevun Ave. WILLIAM HEAFEY, at $3,102, for sewer in the Santa Fe district.

TULARE, CAL.—The City Trustees have accepted the plans of Haviland & Tibbitts for the construction of a sewer system. Estimated cost, $80,000.

LOS ANGELES, CAL.—The Board of Public Works has received the following bids for sewering 16 streets: J. Zarubico & Co., $9,845; J. S. McBride, $12,949; Peter Grbavach, $13,652; W. N. Hendricks, $12,800; Geo. S. Fleming and John S. Ukropina, $11,665; J. Balch & Radich, $11,437; R. N. Nikcwich, $11,763; George N. Vusich, $12,000.

MONTREAL, QUE.—Contract was awarded by the city on May 6 for the construction of the last section of the Sherbrooke St. sewer to M. DINEEN, at $37,072.

PRESCOTT, ONT.—Bids will be received until noon, May 21, by F. W. Elliott, Chn. Sewerage Com., for constructing sewers, septic tank and outlet in connection with the sewerage system of the town. Morris & Moore are Engrs., Pembroke.

FORT FRANCES, ONT.—Bids will be received until May 26 by W. H. Elliott, Town Clk., for furnishing material and constructing an extension to the sewerage system, including vitrified tile pipe and junctions, c.-i. manhole covers, etc.

LEAMINGTON, ONT.—Bids will be received until 8 p. m., May 28, by Alexander Baird, Engr., Leamington, for the dredge and team work and highway bridges required in connection with the improvement of the drainage system on Pelee Island Big Marsh drainage improvement.

REGINA, SASK.—Bids will be received until noon, May 30, by A. E. Chivers, City Clk., for each of the following contracts for the construction of storm water and sanitary trunk sewers and disposal works: Contract A, construction of sewers as follows: 10,761 ft. of 30-in., 3,248 ft. of 48-in., 2,369 ft. of 5-ft. 6-in., 8,392 ft. of 6-ft.; Contract B, supply of 11,500 bbls. of Portland cement for the above sewers; Contract C, supply of reinforcement for sewers; Contract D, supply of sewer pipe for branches from the sewers; Contract E, supply of manhole covers and other special castings; Contract F, supply of 700 cords of field boulders for the percolating filters; Contract G, supply of 3,600 bbls. of Portland cement for the disposal works. A. T. McPherson, C. E., is Consulting Engr., Regina.

MOOSE JAW, SASK.—PATRICK KILKANNY, of Moose Jaw, has secured contract at $9,822, for trenching and laying 7,100 ft. of sewer pipe in this city. Bids were opened on May 2.

GARBAGE DISPOSAL.

(• denotes that this work is advertised in Engineering News.)

BRIDGEPORT, CONN.—Bids are asked until 4 p. m., May 23, by the Special Committee on Garbage at the office of the Mayor, for the reduction of garbage for terms of three, five and ten years.

NEW YORK, N. Y.—Bids are asked by Calvin Tomkins, Comr. of Docks, until noon, May 23, for Contract No. 1228, for furnishing all the labor and materials required for furnishing carts with horses and drivers for disposing of street sweepings from piers and water-front property in the Boroughs of Manhattan, the Bronx, Brooklyn and Queens.

ROCHESTER, N. Y.—The city is considering the question of constructing a crematory for the disposal of rubbish. Estimated cost, $75,000.

EAST LIVERPOOL, OHIO.—Bids for the construction of a furnace and smokestack for the proposed garbage crematory were opened on May 9 by Alex. McBane, Dir. Pub. Ser. as follows: Lewis & Kitchen, Chicago, Ill., $11,700; Dixon Engineering Construction Co., Toledo, $11,998. Decarie Incinerator Co., West Minneapolis, Minn., $24,000.

COLUMBUS, OHIO.—The Board of Public Service, it is stated, will soon ask for a new city garbage disposal contract, planning to abandon the present system of disposing of garbage and contract with parties to erect a disposal plant, contract to run for five years.

STREETS AND ROADS.

(• denotes that this work is advertised in Engineering News.)

PORTLAND, ME.—Bids will be received until June 6 by Comrs. of Cemeteries and Public Grounds, James P. Jordan, Chn., 410 Fore St., for improving roadway at Eastern Promenade. William O. Thompson is Engr., 85 Market St.

FORT McKINLEY (Portland post-office), ME.—Bids will be received until 10 a. m., May 31, by Capt. C. F. Humphrey, Jr., Const. Q. M., U. S. A., 655 Congress St., Portland, Me., for constructing roads and walks at Fort McKinley and Fort Williams, Me.

CONCORD, N. H.—We are officially advised that bids were received on April 29, by H. C. Hill, State Engr., Concord, for constructing the Bethlehem stone road, one mile. F. E. ELLIS has secured the contract to use native stone macadam.

HARTFORD, CONN.—Bids will be received at the office of the State Highway Commissioner, Capitol, until 3 p. m., May 23, for state road work as follows:

Town of Woodbridge, 10,160 lin. ft. macadam on the Litchfield Turnpike, including one 15-in., two 18-in., five 12-in., one 24-in. tile culverts. Plans and specifications with R. C. Newton, First Selectman.

Town of North Canaan, about 3,400 lin. ft. macadam on the Norfolk-Canaan road, including one 15-in. tile culvert. Plans and specifications with N. W. Hardenburgh, First Selectman.

Town of Middlebury, about 6,415 lin. ft. graded road on the Hop Swamp section, including one 12-in. tile culvert. Plans and specifications with W. M. Shepardson, First Selectman.

HARTFORD, CONN.—Contracts for state road work, bids for which were opened by the State Highway Commissioner on May 17, have been awarded as follows:

Town of Winchester, 6770 lin. ft., gravel-telford, on the Norfolk Turnpike, including six 20-in., four 15-in., and three 24-in., tile culverts, to JOHN DE MICHIEL & BROS., Torrington, Conn., $1.54 per lin. ft., for gravel, $2.15 per lin. ft. for telford, 90 cts. for rubble drain. E. G. Pardee, Bethany, Conn., submitted these figures: $1.59 for gravel, $2.19 for telford and 50 cts. for rubble drain.

Town of Colebrook, 9685 lin. ft. gravel-telford on the Norfolk Turnpike, including three 20-in., four 24-in., six 15-in. and three 18-in. tile culverts, to JOHN DE MICHIEL & BROS., Torrington, Conn., $1.45 per lin ft., for gravel, $2.15 per lin ft. for telford, 95 cts. per lin. ft. for rubble drain. No other bidder.

Town of Ridgefield, 1200 lin. ft. macadam, to MERRITT & BUSH, Stamford, Conn., $2.85 per lin. ft. for macadam and $2.95 per lin ft. for telford.

Town of New Milford, 3660 lin. ft. combination gravel road on the New Milford Turnpike, to F. ARRIGONI & BRO., Durham, Conn., $1.97 per lin. ft. for gravel, $2.41 per lin ft. for telford, $1 per lin. ft. for rubble drain. Other bidders were: O. T. Benedict, Pittsfield, Mass., $2.50, ... $1; B. D. Pierce, Jr., Co., Bridgeport, Conn., $2.32, $2.98 and 65 cts.

Town of Brookfield, 14040 lin. ft. combination gravel road on the New Milford Turnpike, to F. ARRIGONI & BRO., Durham, Conn., $1.97 for gravel, $2.41 for telford and $1 for rubble drain. Other bidders were: O. T. Benedict, Pittsfield, Mass., $3, $3.50 and $1; B. D. Pierce, Jr., Co., Bridgeport, Conn., $3.46, $4.06 and 65 cts.

NEW YORK, N. Y.—Bids are asked by Alfred E. Steers, Pres. Boro. of Brooklyn, until 11 a. m., June 1, for regulating and repaving various streets in Brooklyn.

NEW YORK, N. Y.—Bids are asked until 3 p. m., May 26, by the Park Board for furnishing and delivering 500 cu. yds. of road gravel (No. 1, 1910), for parks, Boro. of The Bronx; for furnishing and delivering crushed trap rock and trap rock screenings on parkways in the Boro. of Brooklyn; for furnishing and delivering Hudson River road gravel in parks and on parkways in the Boroughs of Brooklyn and Queens.

Bids are asked by Lawrence Gresser, Pres. Boro. of Queens, until 11 a. m., May 24, (1) for regulating, grading, curbing and laying sidewalks in Prospect St., from Webster Ave. to Payntar Ave., First Ward; (2) for paving with asphalt blocks on a concrete foundation in Academy St., from Freeman Ave. to Webster Ave., First Ward; (3) for regulating and grading in William St., from Harris Ave. to Wilber Ave., and for curbing and flagging from Jane St. to Wilber Ave., First Ward; (4) for repairing and maintaining sheet asphalt pavement, in the Borough of Queens.

Bids are asked until 11 a. m., May 26, by Cyrus C. Miller, Pres. Boro. of The Bronx, (1) for repaving with asphalt blocks on the present concrete foundation the roadway of Brook Ave., from Webster Ave. to Wendover Ave., and setting curb where necessary; (2) for paving with asphalt blocks on a concrete foundation the roadway of Daly Ave., from 176th St. to 177th St., and setting curb where necessary.

NEW YORK, N. Y.—The following bids were received on May 10 by George Cromwell, Pres. Boro. of Richmond, for furnishing all the labor and materials required for regulating and repaving on a concrete foundation with medina sand stone block pavement the roadway of Richmond Ave., from Post Ave. to Blackford Ave.: Thomas F. Carlin, Port Richmond, S. I., $19,670; Joseph Johnsons' Sons, Brooklyn, $21,643; W. J. Quinlen, Brooklyn, $19,835; Londine & Gallo, Brooklyn, $20,555; John E. Donovan, Brooklyn, $20,712.

The following bids were received on May 11, by Alfred E. Steers, Pres. Boro. of Brooklyn, for regulating, grading, curbing and laying sidewalks on Hageman Ave., from Hopkinson Ave. to New Jersey Ave., excluding the lane occupied by and intervening between the tracks of the railroad companies: Moran-Crowley Co., $31,123; Walter L. Cassell, 2627 Bedford Ave., Brooklyn, $27,026; Leo E. Kelly, $34,242; S. Purificato, 449 East 116th St., New York, $25,592; Newman & Carey Co., $29,641. For regulating and paving with asphalt pavement on a concrete foundation the roadway of Seventh Ave., from 43d St. to 49th St.: Uvalde Asphalt Paving Co., 1 Broadway, New York, $11;926; Cranford Co., $12,358; Barber Asphalt Paving Co., 30 Church St., New York, $12,580; Brooklyn Alcatraz Asphalt Co., 407 Hamilton Ave., Brooklyn, $11,664. For regulating and paving with asphalt pavement on a concrete foundation the roadway of 72d St., between Second Ave. and the Shore Road, with the exception of strip 12 ft. in width in the center of the roadway, from First Ave. to a point about 338 ft. easterly, to be paved with granite block on a concrete foundation: Uvalde Asphalt Paving Co., 1 Broadway, New York, $12,569; Cranford Co., Brooklyn, $13,568; Barber Asphalt Paving Co., 30 Church St., New York, $14,129; Brooklyn Alcatraz Asphalt Co., 407 Hamilton Ave., Brooklyn, $12,368. For regulating and paving with asphalt pavement on a concrete foundation the roadway of Sutter Ave., from Van Siclen Ave. to Berriman St.: Uvalde Asphalt Paving Co., 1 Broadway, New York, $16,577; Cranford Co., Brooklyn, $17,556; Barber Asphalt Paving Co., New York, $19,034; Borough Asphalt Co., $16,184.

ALBANY, N. Y.—Bids are asked by the State Highway Commission until 1 p. m., June 6, for the repair and resurfacing of the following state highways: Albany County—Loudon Road No. 119, Sec. 2, Repair Contract No. 76; Delmar-Slingerlands Road No. 92, Repair Contract No. 78. Cattaraugus County—Olean-Allegany Road No. 601, Repair Contract 65. Cayuga County—Owasco Road No. 383, Repair Contract 56; Moravia-Niles Road No. 591, Repair Contract 67. Chenango County—Greene-Smithville Flats Road No. 218, Repair Contract 68; Oxford-McDonough Road No. 224; Norwich-Preston Road No. 598. Cortland County—Cuyler Road No. 40, Repair Contract No. 55. Erie County—Orchard Park Road No. 272, Sec. 5, Repair Contract No. 62; Transit Road No. 89, Sec. 2, Repair Contract 63; Big Tree Road No. 86, Repair Contract 64; Transit Road No. 88, Sec. 1, Repair Contract 66. Fulton County: Gloversville-Mayfield Johnstown Road No. 33, Repair Contract 83. Jefferson County—Redwood-Alexandria Bay Road No. 182, Repair Contract 49; Watertown-Sacketts Harbor-Henderson Road No. 181, Repair Contract 50. Monroe County—Hamlin Road No. 81, Sec. 2, Repair Contract 57; Scottsville Road No. 79, Sec. 2, Repair Contract 58; Clifton Road No. 78, Sec. 1, Repair Contract 59; Scottsville Road

No. 63, Sec. 1, Repair Contract 60; Ridge Road No. 6, Sec. 1, Repair Contract 61. Montgomery County—West Mohawk River Road No. 108, Repair Contract 75; Amsterdam-[illegible]naville Road No. 32, Sec. 1, Repair Contract 85. Oneida County—Deerfield Road No. [illegible] Repair Contract 48; Utica-Paris Road No. [illegible] Onondaga County—Fabius-Apulia Road No. 49, Sec. 1, Repair Contract 52; Fabius-Apulia Road No. 75, Sec. 2; Fabius-Apulia Road No. 121, Sec. 3; West Lake Road No. 48, Repair Contract 53; Marcellus-Ma[illegible] Road No. 74. Ontario County—Go[illegible]-Stanley Road No. 203, Repair Contract [illegible]1; Naples-Atlanta Road No. 204; Naples-Woodville Road No. 205; Honeoye-Hemlock Road No. 191, Repair Contract 54. Otsego County—Gilbertsville-Mt. Upton Road No. 114, Repair Contract 86. Rensselaer County—Albia-Wynantskill Road No. 77, Repair Contract 80; Troy-Brunswick Road No. 10, Sec. 1, Repair Contract 84; Troy-Brunswick Road No. 25, Sec. 2. Saratoga County—Glens Falls-Saratoga Road No. 58, Sec. 1, Repair Contract 79; Waterford Road No. 59, Sec. 2, Repair Contract 81; Waterford Road No. [illegible], Sec. 1, Repair Contract 82. Ulster County—Saugerties-Woodstock Road No. 37, Sec. 1, Repair Contract No. 72; Saugerties-Woodstock Road No. 38, Sec. 2; Kingston-R[illegible]n Road No. 116, Repair Contract 73. Warren County—Loon Lake-Pottersville-Taylors Road No. 692, Repair Contract 77. Washington County—Granville-Troy Stage Road No. 104, Repair Contract 74. Westchester County—Echo Lake-Pines Bridge Road No. 143, Repair Contract 69; Pines Bridge-Yorktown Heights Road No. 148; Yorktown Heights-Putname County Line Road No. 149; White Plains Cross Road No. 20, Repair Contract 70; White Plains-Armonk Road No. 35; Armonk-Mount Kisco Road No. 50; Mount Kisco-Bedford Road No. 51, Repair Contract 71; Bedford-Cross River Road No. 144; Cross River-Turk Hill Road No. 150. S. Percy Hooker is Chn., 53 Lancaster St., Albany, N. Y.

NIAGARA FALLS, N. Y.—Bids will probably be received about June 1 for paving to cost about $30,000. Material is to be selected after bids are received. R. A. McClenathan is City Engr.; Thomas H. Hogan, City Clk.

FORT TERRY (New London, Conn., post-office), N. Y.—Bids will be received by Capt. F. T. Arnold, Constr. Q. M., New London, Conn., until May 30 for 2,900 lin. ft. macadam road and 2,500 lin. ft. road drains at Fort Terry.

PORT JERVIS, N. Y.—We are officially advised that bids were received by John F. Cleary, City Clk., on May 11, for about 11,000 sq. yds. of vitrified brick paving on Pike and Front Sts. and New Jersey Ave. The contract has been let to MULDERRY BROS., of Albany, N. Y. Cost, $23,800. Irving Righter is City Engr.

NEWARK, N. J.—JOHN F. SHANLEY CO., 26 Exchange Pl., Jersey City, has secured the contract for paving portions of New and Hamilton Sts. with bitulithic for $11,231.

TRENTON, N. J.—Bids will be received by the Board of Chosen Freeholders until June 7 for macadamizing roads in Mercer County. Frank J. Epple is County Engr.; J. Mason Ege is Dir.

HACKENSACK, N. J.—Bids will be received until 2 p. m., May 23, by the Board of Chosen Freeholders of Bergen County, at Hackensack, for improving the Paterson Plank Road, from Carlstadt Station to the Passaic River.

PERTH AMBOY, N. J.—Bids are asked by the City Council until 8.30 p. m., June 6, for grading Groom St. George M. Adair is Street Comr.

MOUNT CARMEL, PA.—The CORVELL CONSTRUCTION CO., of Williamsport, Pa., has secured contract for paving at $32,464. Totals of other bids: George H. Keefer, Mount Carmel, $34,265; John A. Leffler, Hazleton, $33,547; Robert W. Henson, Geneva, $31,288, and Feudale & Co., Mount Carmel, $32,966. John Carl, Jr., is Secy. Boro. Council.

ENOLA, PA.—S. W. SHOEMAKER & SON, of Harrisburg, Pa., have secured the contract for constructing granolithic sidewalks and paving in Enola, at a cost of about $25,000.

PHILADELPHIA, PA.—Bids were received on May 11 by the Department of Public Works for the grading and planting trees and shrubs along the opened portion of the Parkway, between Logan Sq. and Spring Garden St. The estimated cost is $25,000. There were two bidders, the McNichol Paving & Construction Co., 19th and Westmoreland Sts., and Daniel S. Bader, Betz Bldg.

SCRANTON, PA.—Bids are asked by the Commissioners of Lackawanna County until noon, May 24, for constructing and repairing macadam roads. E. A. Jones is County Controller.

RICHMOND, VA.—I. J. SMITH & CO. have secured the contract for paving with asphalt the streets surrounding the John Marshall High School at $2.20 per sq. yd.

ROANOKE, VA.—The Norfolk & Western Ry. Co. has awarded the VAUGHN CONSTRUCTION CO., of Roanoke, the contract for constructing a street under railroad tracks on Lynchburg Ave., Northwest Roanoke, at $40,000.

NORFOLK, VA.—The Board of Control on May 4 awarded the contract to BARBER ASPHALT PAVING CO., Land Title Bldg., Philadelphia, Pa., for paving 20,300 sq. yds. in Greater Ghent, at a total of $38,367.

On May 11 the Board of Control awarded a contract to the DENBY GRADING CO. for grading Reeves Ave. at 12 cts. per sq. yd. The only other bidder was the Norfolk & Portsmouth Coal & Ice Co., who offered to do the work for 17½ cts. per sq. yd.

PALATKA, FLA.—We are officially advised that no bids were received by the Board of Trustees for County Bonds, for the construction of a hard surfaced road from the eastern terminus of the highway bridge across the St. Johns River at Palatka, Fla., to the So. Johns County line, and from a point on this road to San Mateo, Fla., ten miles. S. Worden is Secy. of Bd. R. F. Ensley, County Engr. This work will be readvertised.

FERNANDINA, FLA.—Bids will be received until May 21 by G. L. Baltzell, City Clk., for paving Center St.

BELLEFONTAINE, OHIO.—We are officially advised that bids will be received on May 19 for paving, to cost $35,000. The work is in charge of the City Engineer.

AKRON, OHIO.—Contracts for street paving have been awarded by the Director of Service on bids received May 14 as follows: Relaying Mill St. pavement with Medina stone, WILDES & DAVIDSON, $22,289; the other bidders were: Adams Bros. Co., $25,514; R. P. Burnett, $27,202, and George B. Herring & Son, $28,550. The Glenwood Ave. contract has been let to DANIEL O'MARR, but the price has not been fixed as the materials to be used were not determined. The West Buchtel Ave. paving contract with brick and tar filler has been let to McALLONAN BROS. at $5,664. Washington St. to E. McSHAFFREY & SONS, price not fixed because materials not determined. On the Edgewood Ave. paving three contractors are low on certain kinds of materials. The three firms are Wildes & Davidson, F. McShaffrey & Sons and Daniel O'Marr.

STRUTHERS, OHIO.—Bids will be received until May 27 by L. S. Creed, Village Clk., for furnishing material and constructing sidewalks, gutters and intersections to be constructed during the fiscal year beginning Jan. 1, 1910, and ending Dec. 31, 1910.

ELYRIA, OHIO.—Bids for 16 miles of macadam roadway in Lorain County were opened recently by H. L. Dunham, Road Engr. of District No. 1, at Elyria.

For the construction of the West River Road, three miles in length, the bids were: Hadaway Bros. & Robertson, Elyria, $17,080 for sandstone base; $14,089 for limestone base, and $16,632 for field stone base; S. Mendelson, Elyria, sandstone base, $12,584; limestone base, $10,974, and field stone base, $11,884; F. L. Rice & Son, Shelby, sandstone base, $15,802; limestone base, $12,512, and field stone base, $14,682.

The Case Road, 2.51 miles in length, in Ridgeway Township: John Anstine, Kenton, Ohio, sandstone base, $7,167; limestone base, $7,707; fieldstone base, $9,067; S. Mendelson, sandstone base, $8,606; limestone, $7,726; fieldstone, $8,691; F. L. Rice & Son, Shelby, Ohio, lime stone, $6,984; sandstone, $7,704; fieldstone, $8,305; Shaw & Crisp, Lorain, limestone, $10,327; limestone, $9,617; field stone, $9,412; C. T. Winckles, Elyria, sandstone, $8,159; limestone, $7,369; field stone, $8,669.

The Sugar Ridge Road, 1.09 miles, in Elyria Township: Hadaway Bros. & Robertson, sandstone base, $5,517; limestone base, $5,104; S. Mendelson, sandstone, $4,392; limestone, $4,117; F. L. Rose & Son, sandstone, $4,896; limestone, $4,485.

The Chestnut Ridge Road, 4.06 miles, in three townships: Hadaway Bros. & Robertson, sandstone, $15,573; limestone, $14,253; S. Mendelson, sandstone, $16,205; limestone, $14,875; F. L. Rice & Son, sandstone, $14,277; limestone, $12,579; C. T. Winckles, sandstone, $15,595; limestone, $14,475.

The Cowley Road, 2.66 miles, in Eaton Township: S. Mendelson, sandstone, $8,734; limestone, $8,164; R. L. Rice & Son, sandstone, $8,448; limestone, $7,579; C. T. Winckles, sandstone, $8,638; limestone, $8,115.

The Indian Hollow Road, 2.09 miles, in Carlisle Township: John Anstine, sandstone, $6,276; limestone, $5,366; S. Mendelson, sandstone, $7,423; limestone, $5,672; F. L. Rice & Son, limestone, $5,636; sandstone, $6,252; Shaw & Crisp, sandstone, $7,897; limestone, $7,232.

The Stoney Ridge Road in Ridgeville Township, .68 mile in length, S. Mendelson, sandstone, $2,639; limestone, $2,549; F. L. Rice & Son, sandstone, $3,359; limestone, $3,051; C. T. Winckles, sandstone, $2,892; limestone, $2,727.

WAUSEON, OHIO.—Bids will be received at the office of the Auditor of Fulton County until June 6 for the improvement of Road No. 70 and for Road No. 71. All bidders are required to make separate bids for grading and draining and for hauling, placing and rolling the stone.

HAMILTON, OHIO.—Bids are asked by the County Commissioners until noon, May 24, for the reconstruction and repair of the public roads known as the Lebanon and Oxford Turnpike from the Trenton Bridge over the Miami River eastwardly, and the Middletown & Hamilton Pike, from its intersection with said road, and by the construction and erection of embankments and levees to protect. J. E. Brate is County Audr.

CLEVELAND, OHIO.—We are officially adivsed that bids were received on May 14 by the Board of County Commissioners for paving Herbert Hill with 2850 sq. yds. of common Medina block stone. Frank R. Lander is County Surveyor. The contract has been let to the ENTERPRISING PAVING & CONSTRUCTION CO., at $8,550.

DELAWARE, OHIO.—Bids will be received until noon, May 21, by W. F. Whittier, County Surveyor, Delaware, for constructing 1½ miles of Wheeler Road, by grading and macadamizing in Brown and Oxford Townships; and 1½ miles Sherwood Road in Oxford and Troy Townships.

CINCINNATI, OHIO.—Bids are asked until noon, May 23, by the Director of Public Service for the improvement of Livingston St., from the east line of Linn St. to the west line of Central Ave., excepting the intersection of John St., and for the improvement of Livingston St., from the west line of Linn St. to the east line of Baymiller St., by grading, setting granite curbs, paving the roadway with asphalt and constructing the necessary inlets and drains. John J. Wenner is Clerk.

STEUBENVILLE, OHIO.—Bids were received on May 9 by the Pike Commissioners for constructing the Bloomfield and Western pike in two sections as follows: Section No. 1—Rosser & Maloney, $5,173; Liggitt Bros., $4,746; Vanmeter Co., $4,831; Nolan & Leonard, $4,903; Foley Bros., $5,098. Section No. 2—Rosser & Maloney, $5,823; Liggitt Bros., $5,340; Vanmeter Co., $5,438; Nolan & Leonard, $5,523; Foley Bros., $5,737.

PLEASANT RIDGE, OHIO.—Bids are asked by H. B. Hayden, Village Clerk, until noon, June 1, for the improvement of Cortelyou St., from Carthage Road to the north terminus of said street, by grading and macadamizing the roadway, setting combined curbs and gutters on both sides thereof.

MOUNT GILEAD, OHIO.—Bids are asked by the Commissioners of Morrow County until 11 a. m., May 26, for the construction of what is known as the Fulton Road Improvement No. 1, in Lincoln and Harmony Townships.

Bids are asked until 11 a. m., June 3, by the Commissioners of Morrow County for the construction of what is known as the Westfield Road Improvement No. 2, in Westfield Township. Clifton Sipe, Mount Gilead, is County Audr.

ST. CLAIRSVILLE, OHIO.—Bids are asked by E. E. Shepherd, County Audr., until 1 p. m., May 31, for delivering and breaking limestone of the National Road.

BLUFFTON, IND.—The Commissioners of Wells County will receive bids until 1 p. m., May 26, for the construction of six gravel and two stone roads in Harrison Township, length of roads 5,347, 15,735, 13,829, 8,125, 14,937, 10,791, 12,563 and 10,506 ft., respectively. O. D. Garrett is Audr.

MONTICELLO, IND.—The Commissioners of White County will receive bids until noon, June 7, for the construction of a stone road in Big Creek Township. The road will be let in sections. A. G. Fisher, County Audr.

MARION, IND.—Bids will be received by the Commissioners of Grant County until 2 p. m., June 7, for the construction of 7,000 ft. of gravel road, known as the McCullough Road, and a highway, known as the Soldiers Home Boulevard, total length, 5,870 ft.

The Commissioners of Grant County will receive bids until 2 p. m., June 7, for the construction of a stone road in Monroe Township and two vitrified brick highways in Center Township. A. Y. Stone, County Audr.

KENTLAND, IND.—E. R. Bingham, Audr. of Newton County, will receive bids until 2 p. m., June 6, for the construction of a macadam road, known as the Whiteakker Road, in Township 27.

MUNCIE, IND.—Commissioners of Delawareware County will receive bids until 10 a. m., June 8, for the construction of a gravel road in Center Township, known as the C. B. Smith Road. J. E. Davis, County Audr.

WABASH, IND.—The Commissioners of Wabash County will receive bids until 10 a. m., June 7, for the construction of the following gravel roads: The Manchester Road in Pawpaw Township, the Thrush Road in Noble Township, the Bagley Road in Liberty Township, the Maurer Road in Chester Township, the Lester Road in Lagro Township, and the Ryan Road in Lagro Township. J. P. Noftzger is County Audr.

VINCENNES, IND.—John T. Scott, Audr. of Knox County, will receive bids until 2 p. m., June 11, for the construction of 6,391 ft. of gravel road in Johnson Township, known as the Seivers Road.

DETROIT, MICH.—The Common Council of Detroit has directed the Board of Public Works, J. J. Haarer, Comr., City Hall, to advertise for bids for paving the following streets: Ferry Ave., with sheet asphalt, estimated cost, $11,675; Lafferty Pl., with cedar block, estimated cost, $1,820, and Lyman Ave., with cedar block, estimated cost, $1,088; all to have concrete foundation and Medina, Berea or other approved curbing.

The Department of Public Works, J. J. Haarer, Comr., City Hall, has awarded contracts for paving the following streets: JULIUS PORATH, Penobscot Bldg., for paving Calvert Ave. with sheet asphalt, $16,458, and Brush St. with cedar block, $1,733; F. PORATH & SONS, 878 25th St., paving Frederick Ave. with cedar block, $19,530, and Magnolia St. with cedar block, $4,115; T. E. CURRIE, Penobscot Bldg., paving Iroquois Ave. with cedar blocks, $7,826; all on concrete foundations.

HIGHLAND PARK, MICH.—A special election was held in the Village of Highland Park, Mich., and the proposition was carried for issuing $89,000 of bonds for repaving Woodward Ave.

IRONWOOD, MICH.—Bids will be received until May 24 by the Common Council for grading and furnishing materials for paving with tar macadam, about 20,000 sq. yds., a portion of McLeod Ave., Aurora St., Norfolk and Ayer Sts. Jacob Nelson is City Clk.

BLOOMINGTON, ILL.—Bids are asked by the Board of Local Improvements until May 26 for paving. We are officially advised that there is to be 4,755 sq. yds. of asphalt, 5,934 sq. yds. of brick pavement, to cost $18,000. Elmer Folsom is City Engr.

CHARLESTON, ILL.—We are officially advised that 1½ miles of pavement will be laid in this city at a cost of about $40,000. The work will be done by the Board of Local Improvements. J. A. Tremble is City Engr.

NORTH CHICAGO, ILL.—Bids were received as follows on May 11 by the Bureau of Navigation, Navy Dept., Washington, for grading at the Naval Training Station, Great Lakes, North Chicago, Ill.: James Corse, Racine, Wis., 41¼ cts.; Edward M. Lang, Highland Park, Ill., 57 cts.; James Cape & Sons, Racine, Wis., 65 cts.; I. H. Iglehart, Rookery Bldg., Chicago, 48 cts.

ELGIN, ILL.—We are officially advised that bids were received by the Board of Local Improvements on May 9 for grading and constructing a combined cement concrete curb and gutter on a cinder foundation, 6 ins. thick and grading and paving with vitrified brick on 5 ins. of cement concrete foundation, and otherwise improving the roadway of Walnut Ave., from the westerly line of South State St. to the southerly line of South St., 31,530 sq. yds. The contract has been let to ARWIN & PRICE, of Elgin, Ill., at $59,279.

PEORIA, ILL.—The Board of Local Improvements has awarded to J. W. BUSHELL at $52,000, the contract for paving with asphalt Seventh Ave., parts of Hamilton St. and Jefferson St., from Hamilton to Cornhill. Clay Belsley is City Engr.

CHICAGO, ILL.—Contracts for resurfacing and paving portions of ten streets were awarded the AMERICAN ASPHALT PAVING CO. by the Board of Local Improvements on April 29. The RYAN CO. was awarded a contract for paving with granite West 43d St., from South Ashland Ave. to South Robey St. The contracts let the AMERICAN ASPHALT CO. follow: La Salle Ave., from Chicago Ave. to North Clark St.; Vincennes Ave., from East 47th St. to East 51st St.; North Avers Ave., from West North Ave. to Wabansia Ave.; Cornelia St., from North Clark St. to Southport Ave.; Cullom Ave., from North Robey St. to Lincoln Ave.; West 44th St., from State St. to Wentworth Ave.; North 45th Ave., from Cortland St. to Humboldt Boulevard; North Leavitt St., from Grand Ave. to West Chicago Ave.; Nelson St., from Perry St. to North Ashland Ave.; Sheldon St., from West Madison St. to Washington Boulevard.

PEKIN, ILL.—The Board of Local Improvements received bids for the paving of Washington St. on May 7, and the contract was awarded to D. H. JANSEN & CO., of Pekin, Ill., their bid being $1.69 per sq. yd., or a total of $26,975. There were only three bids submitted, they being as follows: J. Bryan Watts Co., Springfield, $1.79 sq. yd., total, $28,260; Federal Improvement Co., Chicago, $1.90 sq. yd., total $29,940; D. E. Jansen & Co., Pekin, $1.69 sq. yd., total, $26,975. Pavement is to be of mineral rubber.

HIGHLAND PARK, ILL.—Contracts amounting to $30,000 for improvements in Highland Park have been awarded. The work will be done by three firms. The largest contract, amounting to $15,134, for repairing Waverly Ave., a distance of 27,000 ft., was awarded to the SCHMIDT CONTRACTING CO., of Chicago. A contract to build a bridge across the ravine on Waverly Ave., costing $6,000, was awarded to JOHN O'BRIEN, of Chicago. The bridge is to be of reinforced concrete, 25 ft. high and 130 ft. long. There will be five arches.

DE PERE, WIS.—Bids will be received until May 23 by Commission on Streets, Sewers and Sidewalks for grading and paving with concrete and Portland cement, combined curb and gutter, George St., from Broadway to Huron St. E. X. Collette is Chn.

WATERTOWN, WIS.—Bids will be received until May 27 by Board of Public Works for paving and curbing Fifth and North Fifth Sts., requiring about 3,500 cu. yds. of excavation, 6,500 lin. ft. of concrete curb and gutter, 9,455 yds. vitrified block pavement. Arnold Kraeft is City Engr.; F. S. Weber is Secy.

RACINE, WIS.—Bids will be received until June 4 by Board of Public Works for paving Douglas and Carlisle Aves. Charles J. Poetsch is City Engr.

OSAGE, IOWA.—Bids will be received until 7.30 p. m., May 31, by the City Clk. for concrete paving, about 28,353 sq. yds., 8,160 lin. ft. cement curb, etc. S. B. Gardner is Engr., Eldora, Iowa.

CENTERVILLE, IOWA.—We are officially advised that McGUIRE & STANTON, of Leavenworth, Kan., at $64,711, were awarded contract on May 13 for the following work: 25,930 sq. yds. of brick paving on a 5-in. base, with 1½-in. cushion, cement filler, including grading; 20,910 lin. ft. combined curb and gutter, with 24-in. gutter and 1-in. wearing coat; 4,000 sq. yds. of extra grading. Hall & Adams are City Engrs.

OTTUMWA, IOWA.—Bids are asked by H. C. Williams, Chn. Street Com., until 8 p. m., May 26, for paving and curbing various streets in Ottumwa.

DULUTH, MINN.—The following bids were received by the County Commissioners on May 5 for constructing eight miles of Vermillion Road: The Colvin-Robb Co., of Biwabik, $7,500; McAdams & Preston, Duluth, $7,700; August Lund, Eveleth, $8,800; M. F. Marion, Tower, $7,750; Emil Bekkaren, Markham, $15,992; Albert Critz, Duluth, $9,990; A. N. Peterson, Eveleth, $9,400; H. L. Bartlett Co., Virginia, $10,643.

ST. PAUL, MINN.—The GENERAL CONTRACTING CO., Temple Court, Minneapolis, was the lowest bidder on repaving with asphalt, Summit Ave., from Selby Ave. to Dale St., at $53,940. L. W. Rundlett is City Engr.

LINCOLN, NEB.—Bids are asked until 1 p. m., May 21, by Roscoe C. Ozman, City Clerk, for grading in District No. 12 and for paving in District No. 177.

BROOKFIELD, MO.—Bids are asked until May 27 for paving certain streets in Brookfield. Lee Fletcher is City Engr.

HAVRE, MONT.—THE TWO MIRACLE CONCRETE CORPORATION, Minneapolis, Minn., has secured contract for constructing cement walks in Special Improvement Districts Nos. 9, 10, 11, 12 and 13, at $8,500. S. L. Hanley is City Engr.

AMARILLO, TEX.—A contract was let on May 6 to L. DALTON, of Dallas, Tex., for the engineering and supervision of street paving and sewer extension to the amount of $125,000. Work under the contract will begin at once.

FORT SAM HOUSTON, TEX.—Bids are asked by P. W. Guiney, Constr. Q. M., until 11 a. m., June 9, for macadamizing roads, construction of concrete gutters, concrete walks, etc., at Fort Sam Houston.

HOUSTON, TEX.—On April 23, according to the Houston "Post," contracts were awarded by the County Commissioners. The first contract awarded was that of the Web-

ster Air Line road, which is 18 miles in length, running from the Harrisburg Road south of the town of Harrisburg, through South Houston to the Galveston County line, where a connection will be made with a road to be constructed by Galveston County. This contract was awarded to SUDERMAN-DOLSON CO. The bidders on this work and the amounts bid were as follows: W. S. Hipp, $59,540; Suderman-Dolson Co., $61,-542; Texas Grading Co., $67,341; W. D. Haden, $69,460; M. C. Otto, $75,440.

The contract for building eight miles of pavement on the Main St. Road was awarded to W. S. HIPP. The bidders on this piece of work were: W. S. Hipp, $32,960; Texas Grading Co., $36,286; L. R. Daivs, $37,295.

The contract for paving four miles of the Westheimer Road was awarded to L. R. DAVIS. The bidders on this job were: Texas Grading Co., $16,876; L. R. Davis, $18,720; W. S. Hipp, $19,312.

The contract for paving 2½ miles of the La Porte and Seabrook Road was awarded to W. D. HADEN. The bidders on this work were: W. S. Hipp, $9,350; W. D. Haden, $10,725; A. C. Workman, $11,310; Texas Grading Co., $11,549.

All of the bids received for paving 3½ miles of the Lynchburg and Crosby County road were rejected by the Court, and the County Engineer was instructed to build the road under the directions of the Court. The bidders on this work were: M. C. Otto, $16,790; John Farmer, $17,875; Texas Grading Co., $19,110; R. V. Tompkins, $19,110. The engineer was also instructed to do the work on the German Ave. road under the directions of the Court. This road will run from the city limits through Magnolia Park.

Bids will be received by the Court at the May term for completing four miles of the Lynchburg and Crosby road running from the Crosby end of the pavement. The Auditor was instructed to advertise for the bids.

From the original estimate made on the Webster Air Line Road of $90,000, sufficient money was saved by the county to pave the La Porte and Seabrook Road the entire length. That portion of this road that is not covered by the contract awarded to W. D. Haden will be let out by contract at the May term of the court.

CLINTON, OKLA.—The HEMAN CONSTRUCTION CO., Fullerton Bldg., St. Louis, Mo., has secured contract for paving with sheet asphalt. Totals of other bids: Warner-Quinlan Asphalt Co., $192,089; Barber Asphalt Paving Co., $198,399; Cleveland Trinidad Paving Co., $192,026. J. O'Hearn is City Engr.

COLORADO CITY, COLO.—W. T. RODNEY, of Colorado City, has secured the contract for improving Colorado Springs-Denver Road at $9,268.

BELLINGHAM, WASH.—K. SAUSET has been awarded the contract for the improvement of Chestnut St., from Forest to Commercial St., by paving with asphalt, at a bid of $28,704.

The contract for improving Hastings St. in Silver Beach, from Dakin to Alabama Sts., was awarded to HADDLE & HAWKINS.

SEATTLE, WASH.—The following bids were submitted on April 29 to the Board of Public Works for paving, etc., on Western Ave., et al: (a) by T. Ryan, Sullivan Block, Seattle; (b) by HANS PEDERSON, Alaska Bldg., Seattle, Wash.: 13,706 sq. yds. of granite paving and granite alley crossings, (a) $128,459, (b) $129,781; 13,706 sq. yds. sandstone paving with sandstone alley crossings, (a) $124,623, (b) $127,650; 2,400 sq. yds. of brick block, 11,306 sq. yds. of granite paving, with granite alley crossings, (a) $125,579, (b) $127,261; 2,400 sq. yds. brick block, 11,306 sq. yds. sandstone paving, with sandstone alley crossings, (a) $122,391, (b) $125,490 (the last price accepted).

TACOMA, WASH.—The contract for paving Steele St. has been awarded to the INDEPENDENT ASPHALT PAVING CO. at $25,643. D. B. Sheller is Comr. of Public Service.

WENATCHEE, WASH.—The contract for the improvement of Mission St., including about 3,000 ft. of paving, has been awarded to ALLEN & McNERNEY, of Wenatchee, at $71,115.

BERKELEY, CAL.—The ESTERLY CONSTRUCTION CO., of Berkeley, has secured the contract for 500,000 ft. of cement sidewalks to be laid in Northbrae, at about $50,-000.

SAN JOSE, CAL.—Contracts for road improvements have been awarded as follows: Section A, 6,705 ft., to JOHN F. ADAMS, of San Jose, $8,779, and Section B, 10,100 ft., to JOHN W. WILSON, of San Jose, $9,-500.

RICHMOND, CAL.—GEORGE W. CUSHING, of Oakland, Cal., has secured the contract for paving Seventh St. and Nevun Ave. at $15,083 and $22,388, respectively.

LOS ANGELES, CAL.—The FAIRCHILD-GILMORE-WILTON CO. has secured the contract for paving, with asphalt, Wall St., at $20,226.

The Mesa Land Co., V. J. Rowan, Engr., has awarded contract to J. A. MERRILL for grading, oiling and constructing cement curbs and sidewalks, on 80 acres of the Angeles Mesa Tract, at $38,696; additional work to be done at the following rate, 23 cts. per lin. ft. for cement curbs, 8½ cts. per sq. ft. for cement walks, 11 cts. per sq. ft. for oiled streets and gutters, 18 cts. per cu. yd. for grading and moving dirt.

PRESCOTT, ARIZ.—The contract for constructing 13 miles highway between Prescott and Phoenix bids opened April 29, has been awarded to JOHNSON-SHEA CO., of Riverside, Cal., at $25,000. R. A. Craig is Secy. Bd. of Control.

MANUFACTURING PLANTS.

(* *denotes that this work is advertised in Engineering News.*)

WEST WARREN, MASS.—The TRACY BROS. CO., of Waterbury, Conn., has been awarded the contract to erect a factory for the Warren Cotton Mills. The plans call for a 2-story brick structure, which will cost approximately $30,000.

NEW YORK, N. Y.—Plans have been filed for a 9-story factory to be built at Hubert and West Sts. Susan W. Duncan is the owner. Cost, $250,000.

BUFFALO, N. Y.—A 4-story brick factory is to be built at 62 Grosvenor St., corner of North Division St., by the Charles Berrick Estate.

*MADISON BARRACKS (Sacket Harbor), N. Y.—Bids are asked by the Constructing Q. M. until 2 p. m., June 13, for the construction, heating, wiring and furnishing electric fixtures, making necessary water and sewer connections, of a bakery, and construction of necessary roads and walks in connection therewith.

POTTSTOWN, PA.—The Vaughan Knitting Mill, recently destroyed by fire, will be rebuilt, somewhat larger, on the old site at Penn and Queen Sts. The Vaughan Company has acquired the Searles plant at High and Oanatawny Sts., and will operate both plants. About 200 machines will be installed and a full force of 150 hands will be employed.

PHILADELPHIA, PA.—Stearn & Castor, Archs., Stephen Girard Bldg., Philadelphia, are preparing plans for a 6-story mill, to cost $100,000, for the A. J. Cameron Co., at Glenwood Ave. and Pacific St.

CONNELLSVILLE, PA.—The American Reduction Co. has decided to enlarge and modernize its plant at Reduction, expending $50,000.

BALTIMORE, MD.—L. Grief & Bro., manufacturers of clothing at Eutaw and German Sts., have made application to erect a factory on Ashland Ave., near Milton Ave. The factory will be used for the manufacture of clothing. The structure, which will be of brick construction, with slate roof and heated by steam, will cost $8,000. It will be one story high and will cover a lot 75 × 100 ft. The plans were drawn by Louis Levi, Arch., American Bldg. R. B. MASON, Builders' Exchange, is the builder.

The Paper Mills Co., manufacturers of paper bags, now at Frederick and Lombard Sts., will rebuild on the south side of Wicomico St., between Scott and Stockholm Sts. The new building will be two stories high, 130 × 160 ft. It will be constructed of heavy timbers, and will be installed with the company's own power equipment for lighting and heating purposes. Jacob F. Gerwig, 11 East Lexington St., is Arch. The contract has been let to R. B. MASON, Builders' Exchange.

BESSEMER CITY, N. C.—It is stated that the Osage Mfg. Co., of Bessemer City, N. C., will invest about $75,000 for the purchase of additional machinery, including carding equipment, electrical motors, weaving equipment, etc. This company is at present operating about 15,000 spindles, 400 looms, etc., on the production of sheeting, etc.

WINSTON-SALEM, N. C.—The P. H. Hanes Knitting Co., of Winston-Salem, has engaged O. A. Robbins, of Charlotte, N. C., as Arch.-Engr. for its proposed cotton yarn mill of 10,000 spindles and accompanying equipment. He will prepare the plans and specifications, and be in charge of erecting the buildings and installing the machinery. The main building probably will be 500 × 125 ft., one story high, with monitor roof. Buildings and machinery will represent an investment of about $250,000. Noted on April 14.

J. F. ANGE, of Winston-Salem, N. C., who recently secured the contract to erect the various buildings of the Inverness Mills Co., of that city, has obtained municipal building permits. His report shows that the cotton mill proper will comprise three 2-story brick buildings, of mill construction, connected with the municipal water and sewer systems, wired for electric lighting, and costing about $90,000. The operative dwellings will include 15 1-story and five 2-story frame cottages connected with city water and sewer systems, and costing $12,000. The company is capitalized at $200,000 and will install 8,000 spindles, 200 looms, steam power equipment, etc., for producing the highest grade of wide print cloth. Lawrence McRae is Treas. The Archs.-Engrs. in charge are C. R. Makepeace & Co., of Providence, R. I. Noted on April 21.

MOORESVILLE, N. C.—The Mooresville Cotton Mills Co., of Mooresville, will build an additional mill of considerable equipment. It is probable that 30,000 spindles and 1,000 looms will be decided on. This would mean an expenditure of $600,000. A definite and authoritative statement is expected to be made soon. The company now operates an equipment of 28,000 ring spindles, 2,200 mule spindles, electric and steam power, etc., manufacturing colored goods, fine sheetings and yarns.

HIGH POINT, N. C.—The Pickett Cotton Mill has engaged Lockwood, Greene & Co., 93 Federal St., Boston, Mass., Archs. and Engrs., for its proposed 12,000-spindle and 300-loom plant. Capital stock, $250,000. R. L. Steele, of Rockingham, N. C., is Pres., and F. M. Pickett, of High Point, Treas.

GREENEVILLE, S. C.—The Nuckasee Mfg. Co., of Greenville, S. C., has been incorporated with a capital stock of $50,000 for the purpose of establishing a plant for the manufacture of underwear. Its incorporators are F. W. Symmes, W. C. Poe, Marion Brawley and David Jennings. Mr. Symmes will be the manager of the enterprise.

SIMPSONVILLE, S. C.—The stockholders of the Simpsonville Cotton Mills of Simpsonville, S. C., contemplate increasing the company's capital stock from $150,000 to $500,-000. This action is to be taken in connection with the company's recently announced plan for the erection of an additional mill to be equipped with 16,000 spindles and 400 looms. The new machinery will require the erection of a 134 × 300-ft. extension to the present buildings, and the construction of 60 cottages for operatives. The company now has 8,192 ring spindles and 200 looms, operating on the production of print cloth and sheeting.

COLUMBUS, GA.—The Meritas Mill, of Columbus, Ga., which was lately incorporated with a capital stock of $300,000, is preparing to arrange for the erection of its plant. This company has a 20-acre site and will provide modern buildings equipped with the machinery for manufacturing the class of cotton cloth used as the basis of oil-cloth. The basis cloth will be shipped to the Standard Mills in New York for finishing. The principal incorporator of the Meritas company is Alvin Hunsicker, Gen. Mgr. of the Standard Oil Cloth Co., 320 Broadway, New York.

MORRISTOWN, TENN.—C. H. Bacon, Gen. Mgr. of the Loudon Hosiery Mills, Loudon, Tenn., and J. M. Givens, of New York, are planning the organization of a corporation to build a hosiery knitting mills at Morristown, Tenn. They contemplate a capitalization of $50,000 and they require that Morristown people subscribe $20,000 and furnish a free site for the plant. The Morristown Board of Trade is interested in the enterprise and is now engaged in endeavoring to secure the necessary subscriptions to the stock.

COLUMBUS, OHIO.—L. S. STEWART, Ohio State University Grounds, has taken the contract, on a percentage basis, for the erection of a factory building in South Columbus, for the Buckeye Stamping Co. The plans are now being completed and the contractor will be able to start work in a few weeks. The building will be completed by fall. It will be fireproof.

SOUTH BEND, IND.—The Stephenson Underwear Mills will spend approximately $150,000 this year in enlarging the plant on East Colfax Ave., according to an official announcement. The contract for the construction of a 4-story brick and concrete building, to be erected east of the present factory, has been awarded the H. G. CHRISTMAN CO. The factory building will be built of reinforced concrete with brick trimminsg and will be strictly fireproof. The structure will carry steel ceilings. It will be well lighted, a large area of the outer walls being of glass. It will be protected against possible fire with a full automatic sprinkler system.

DETROIT, MICH.—The American Cigar Co., William Lichtig, Mgr., State St. and Park Pl., Detroit, have purchased a site and announces that it will build a 7-story factory, 60 × 100 ft.

M. R. Burrowes, Trussed Concrete Bldg., Detroit, is taking figures on the proposed 2-story factory building, 131 × 200 ft., for the American Lubricator Co., William M. Levyn, Secy., 93 Catharine St. Paving and stock brick, Bedford stone, mill construction, composition roof, structural iron, wood and concrete floors and electrical fixtures will be used in construction. Cost, $35,000.

ESCANABA, MICH.—A match factory is to be established at Escanaba by Theodore Schneider, of Big Bay, and some of the lumber interests in the vicinity. The factory will utilize refuse from the sawmills of Escanaba and Wells.

NORTH CHICAGO, ILL.—Bids were received as follows on May 11 by the Chief of Bureau of Navigation, Navy Dept., Washington, D. C., for furnishing laundry machinery at the Naval Training Station, North Chicago, Great Lakes, Ill.: Troy Laundry Machinery Co., 23d and La Salle Sts., Chicago, Item 1, $3,140; Item 2, $12,000. Bess Laundry Machinery Co., Hamilton, Ohio, Item 1, $4,017; Item 2, $10,748.

CHICAGO, ILL.—The lot, 36 × 82½ ft., at the southeast corner of West Adams and South Jefferson Sts., together with ground space 212 × 82½ ft., adjoining northeast corner of Quincy and Jefferson Sts., forming an L-shaped piece, has been bought by Frank A. Hecht, Pres. of Kaestner & Co., 245 Jefferson St., manufacturers of machinery. The purchase was made from the trustees of the Estate of John Sollitt, the tract in all embracing 20,460 ft. Mr. Hecht will proceed at once to erect a building of from six to eight stories high, fireproof, which will cost from $200,000 to $250,000. The plans have not been completed, but work will start in a short time, it was announced.

OSHKOSH, WIS.—The FLUOR BROS. CONSTRUCTION CO. has the general contract and CHARLES B. MEYER & SONS the contract for the brick work on the factory building for the Waite Grass Carpet Co., on New York Ave.

MILWAUKEE, WIS.—The WORDEN-ALLEN CO., of this city, has been awarded the contract for building a $100,000 factory building for the Globe Seamless Steel Tubes Co. on Burnham St. The building will have one story and will be 468 × 500 ft., of reinforced concrete.

Hirschberg-Williams-Washburn Co., Engrs., are preparing plans for a 5-story reinforced-concrete factory building to be built by the Harley-Davidson Motor Co., at Chestnut and 38th Sts.

MANITOWOC, WIS.—The William Rahr Sons Co., which recently anounced it would build a $250,000 addition to its malting plant, has ordered plans drawn for a brewery plant.

RACINE, WIS.—The Wisconsin Corliss Engine Co. will build a $15,000 pattern shop and warehouse. It will have one story and will be 168 × 200 ft., of reinforced concrete. Kirchhoff & Rose, Majestic Bldg., Milwaukee, Archs.

CEDAR RAPIDS, IOWA.—W. G. HASKELL will erect a 2-story building, 40 × 80 ft., at Sixth Ave. and Fourth St., for the National Biscuit Co.

WINNEBAGO, MINN.—The plant of the Winnebago Drain Tile Co. has been destroyed by fire. Loss, $20,000 to $30,000. It will be rebuilt.

SOUTH ST. PAUL, MINN.—The J. T. McMillan Co., pork packers, of St. Paul, has leased a site for the erection of a rendering plant.

BRAINERD, MINN.—The contract for all the structural iron required in the erection of the foundry buildings and storehouses for the Northern Pacific Ry. Co., amounting to about 750 tons, has been let to the ST. PAUL FOUNDRY CO., of St. Paul, Minn.

SAN BERNARDINO, CAL.—Dr. C. D. Dickey, Third and D Sts., states that he will erect a 2 or 3-story brick laundry building at Third and G Sts.

LONG BEACH, CAL.—Bids will be received by D. C. Narver, Secy. of the American Gas Engine Co., 915 South Main St., Los Angeles, for the erection of a factory building for the company at Long Beach, Cal. The building is to be one story high, 50 × 125 ft., with concrete foundation and heavy timber frame. The company is incorporated for $80,000 and will manufacture marine engines.

LONG POINT (Montreal post-office, QUE.) —The proposed plant for the Montreal Steel Works, Ltd., for which 35 acres of land were acquired at Long Point some months ago, is to be started immediately, according to the Montreal "Gazette," and it is estimated that nearly $2,000,000 will be spent during the next two years. K. W. Blackwell is Pres., and James Reid Wilson and W. F. Angus are Vice-Pres. The property purchased is a field for the steel company's operations and are on both sides of Notre Dame St. and near the water, where convenient shipping and landing facilities are at hand. The property adjoins the Viau Park, while the property of the Canadian Northern Railway forms the boundary of the steel company's areas. The entire installation will comprise several large buildings; those most required will be started first. The capital of the Montreal Steel Works, Ltd., reaches $1,500,000, of which $800,000 represent the preferred stock and $700,000 the common, so it is probable that a new bond or stock issue will be made about the time the new plant in the East End is started.

LONDON, ONT.—Arthur E. Hurd, Business Agent here of the Canadian Pacific Ry. Co., has closed a deal for over $100,000 worth of land near Quebec St., which will be used for the erection of shops, round-house, station, office buildings, etc.

COLBORNE, ONT.—See Winnipeg, Man.

WINNIPEG, MAN.—The Maple Leaf Milling Co. has let the contract to the W. A. HARPER CONSTRUCTION CO., of Winnipeg, for the construction of 17 elevators in Saskatchewan. The company will erect a 1,000,000-bushel elevator at Point Colborne, Ont.

MISCELLANEOUS CONTRACTS.

(* *denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news relative to canal projects, etc., will be found under Water Supply—Irrigation.

SUBWAY.—Bayonne, N. J.—See item under Electric Railways.

GRAVEL, TRAP ROCK.—New York, N. Y. —See item under Streets and Roads.

*RIPRAP.—Wilmington, N. C.—Bids will be received by Capt. Earl I. Brown, Corps Engrs., U. S. A., until noon, June 14, for about 12,000 tons of riprap stone.

WHARF.—Shediac, N. B.—Bids will be received until 5 p. m., May 26 by N. Tessier, Secy. Dept. Public Works, Ottawa, for constructing a wharf at Shediac, N. B.

DAM.—Minnedosa, Man.—The contract for building the dam on the Little Saskatchewan River here was awarded to SNYDER BROS., of Portage la Prairie, Man., at $40,528.

CEMENT.—New York, N. Y.—Bids will be received until noon, May 31, by George Cromwell, Pres. Boro. Richmond, for furnishing and delivering 300 bbls. of Portland cement.

RIPRAP.—Plymouth, Mass.—Bids will be received by Lieut.-Col. Edw. Burr, Corps Engrs., U. S. A., Boston, until noon, June 6, for riprap stone in dike on Long Beach, Plymouth Harbor, Mass.

REVETMENT.—South Haven, Mich.—The Harbor Improvement Committee has recommended award of contract for construction of a revetment in the harbor to Robt. Love and N. P. Nelson, of Muskegon, at $33,586.

PIER.—Colchester, Ont.—Bids will be received until June 3 by Department of Public Works, Ottawa, for constructing an extension to pier at Colchester. H. J. Lamb, Esq., Dist. Engr., Confederation Life Bldg., Toronto.

REPAIRING ARCH.—New York, N. Y.—Bids will be received until 3 p. m., May 26, by the Department of Parks, for all labor and materials required for repairs to Washington Arch, in Washington Square, Boro. Manhattan.

CANAL.—Ottawa, Ont.—The BISHOP CONSTRUCTION CO., of Toronto and Montreal, has secured contract for Section No. 6 of the Trent Valley Canal, containing about four miles of extension, from Crowe Bay to Healey Falls, Ont.

DREDGING.—Ottawa, Ont.—Bids will be received until 5 p. m., May 23, by the Department of Public Works for dredging required at the following places in the Province of Ontario: Five Miles Narrows, Spanish River, Welland River.

DRAINAGE, ETC.—Pelee Island, Ont.—Bids will be received until May 28 by Alex. Baird, Engr., Leamington, Ont., for the Pelee Island Big Marsh Drainage Improvement, consisting of dredge and team work; also highway bridges.

DITCH.—Sutherland, Iowa.—The Board of Supervisors on May 2 let the contract for digging the drainage ditch in Hartley Township, which will straighten the Ocheydan River, to GEO. W. McCARTER, of Warsaw, Ind., at 9.84 cts. per cu. yd.

*FOUNDATIONS, PIER EXTENSIONS.—Wheeling, W. Va.—Bids will be received until 11 a. m., June 15, by Capt. F. W. Altstaetter, Corps Engrs., U. S. A., for constructing Poiree dam foundations and extensions of piers for Dam No. 13, Ohio River.

AIR COMPRESSOR.—New York, N. Y.—Contract has been let by the Department of Bridges for furnishing and erecting one duplex two-stage air compressor at the Brooklyn Bridge, Boro. of Brooklyn, to the INGERSOLL-RAND CO., 11 Broadway, at $4,3[illegible]

CEMENT.—Portland, Ore.—The RIVERSIDE PORTLAND CEMENT CO., Kerchoff Bldg., Los Angeles, Cal., has been awarded contract for 225,000 bbls. of Portland cement by the Portland Ry., Light & Power Co. for use in power development project on the Clackamas River, Ore.

STEAMER.—Washington, D. C.—Bids for the construction of the new steamer Northland for the Norfolk & Washington Steamboat Co., of Washington, have been received by that company. The Newport News Dry Dock & Shipbuilding Co., of Newport News, Va., was the lowest bidder.

SEATS.—New York, N. Y.—Bids are asked until 3 p. m., May 26, by the Department of Parks for furnishing all the labor and materials necessary to manufacture and set up [illegible] stationary seats on Ocean and Eastern parkways, Boro. of Brooklyn, together with all the work incidental thereto.

DOCK.—Perth Amboy, N. J.—Contract has been awarded by the Public Service Corporation of New Jersey to the GENERAL CONTRACTING & ENGINEERING CO., 50 Church St., New York, for the construction of a dock for the first named company's proposed electrical plant in Perth Amboy.

TESTING MATERIALS.—Cleveland, Ohio.—Bids will be received by the Board of County Commissioners until 11 a. m., June 8, for the testing of materials for one year beginning June 15, 1910, in accordance with the form of contract and specifications to be furnished by Frank R. Lander, County Engr.

ROAD OIL.—New York, N. Y.—Bids will be received until 3 p. m., May 26, by the Department of Parks for furnishing and delivering 1,000 bbls. of emulsifying road sprinkling oil at Prospect Park West and Seventh St., Prospect Park, and gravel pit, Ocean Parkway, near Avenue P, Boro. of Brooklyn.

LEVEE.—Jacksonville, Ill.—Bids will be received until 11 a. m., June 2, by Charles W. Brown, Engr., Scott Block, Jacksonville, for approximately 100,000 cu. yds. of levee work and 74,000 cu. yds. of ditch work in the Meredosia Lake Drainage and Levee Dist., in the western part of Morgan and Cass Counties, Ill.

WALL.—Rahway, N. J.—Bids will be received until May 27 by Frank Moore, Supt. New Jersey Reformatory, for furnishing and delivering f. o. b. about 135,000 lbs. of rods, 5,000 tons ¾-in. crushed rock (trap or granite), 2,150 tons clean, sharp sand, and 4,700 bbls. concrete (Portland), in cotton, to be used in the construction of a concrete wall.

FIRE HOSE.—New York, N. Y.—Bids will be received until 10.30 a. m., May 23, by the Fire Department for furnishing and delivering 20,000 ft. rubber fire hose, 2½-in.; 10,000 ft. rubber fire hose, 3-in., boroughs of Manhattan The Bronx and Richmond.

Also for furnishing and delivering 30,000 ft. rubber fire hose, 2½-in., boroughs of Brooklyn and Queens.

DREDGING.—Boston, Mass.—Contract for the completion of the dredging and straightening of Alewife Brook has been let to the EASTERN DREDGING CO., 247 Atlantic Ave., Boston, at $51,660. The company will start work at once as the dredging must be completed by Oct. 1. This work is under the jurisdiction of the Metropolitan Park Commission, Boston.

DITCH.—Glenwood, Iowa.—The Board of Supervisors of Mills County on May 2 received bids for the construction of the Mills County extension of the Keg Creek ditch. Ten bidders competed for the work, which was let to FORRESTALL & DOWNING, of Milwaukee, at 7.97 cts. per cu. yd. Estimated cost, $325,000. E. E. Spetman, of Council Bluffs, Iowa, is Engr.-in-Charge.

DITCH.—Conde, S. Dak.—Bids were received on May 4 by the Board of County Commissioners at Redfield, for the entire construction of an open dredge ditch, known as the Conde Drainage Ditch, about 145,000 cu. yds. of excavation. Contract has been awarded to SWEENEY & SON, White Bear Lake, Minn., at 6.7 cts. per cu. yd. J. C. Carpenter is the Engr., Watertown; W. J. Bingham, County Audr.

STEEL STEAMER.—Ottawa, Ont.—Bids will be received by A. L. Jarvis, Asst. Deputy Minister, and Secy. of Agriculture, Ottawa, until noon, May 31, for the construction of a steel steamer for the (fresh water) Quarantine Service at Grosse Isle (Quebec), of the following leading dimensions, namely: Length, extreme, 113 ft. 3 ins.; beam, 23 ft.; depth, 12 ft. 6 ins. To be delivered at Quebec, in the Province of Quebec.

JETTIES, ETC.—South Chatham, Mass.—Bids will be received until May 20 by the Board of Harbor and Land Commissioners, Boston, for improving Bucks or Mill Creek at South Chatham, to consist of furnishing material and building two stone jetties, excavating channel between them and closing old mouth of creek with earthen dike faced with stone, requiring about 2,600 tons of stone and removal of 2,000 cu. yds. of sand.

STEAMERS.—Baltimore, Md.—The MARYLAND STEEL CO. has been awarded the contract for two passenger and freight steamers by the Chesapeake Steamship Co. The two steamers will cost nearly $1,000,000. They will be sister ships and will be named the "City of Baltimore" and the "City of Norfolk." Each will be 310 ft. long, over all, 46 ft. beam at deck, and 42 ft. beam at water line and 60 ft. beam over guards. Each is to be equipped with 147 staterooms.

CABLE, WIRE.—Washington, D. C.—Bids will be received until May 19, by the Chief Signal Officer, War Dept., for furnishing three miles cable, type 213; 25,000 ft. cable, type 411; 10,000 ft. cable, type 415; 20,000 ft. cable, type 414; 20,000 ft. cable, type 415; 10,000 ft. wire bridle, rubber covered; 50 miles hard drawn copper wire and 50,000 ft. messenger strand.

Also until May 21 for furnishing four miles of cable, type 213; 5,000 ft. cable, type 401; 5,000 ft. cable, type 403; 20,000 ft. cable core, rubber insulated; 1 conductor and 40,000 ft. antenna wire.

DRAIN.—Rockwell City, Iowa.—Bids will be received until 1.30 p. m., May 23, by C. O. Dixon, County Audr., for the construction of Joint Drain No. 70, in Webster County, and No. 95, in Calhoun County. Estimated quantity, 623,079 cu. yds. All bids must be by sections and bids may also be filed for drain or improvement complete. The payments on this work will be as provided for by the Iowa law, 80% monthly estimates, balance on completion. It is probable that bonds will be sold and the contractor on this work paid in cash. G. P. Smith, Fort Dodge, Iowa, is Engr. in charge of construction.

TUNNEL.—Salt Lake City, Utah.—FREE & TAYLOR, of Salt Lake City, have been awarded the contract for driving a 14,000-ft. bore for the Snake Creek Mining & Tunnel Co. Starting on Snake Creek, just above Mill Flat, the tunnel will pursue a course, approximately toward Silver Islet Lake, near the head of Bonanza Flat, crosscutting the entire formation of the Park City district, attaining a maximum depth of 3,500 ft. under the highest points, with a depth of about 2,000 ft. in Bonanza Flat, or 500 ft. below the present lowest working of the Daly-Judge mine. The tunnel will be 6½ × 9 ft. in the clear, with a waterway on one side 3½ ft. deep and 4 ft. wide. It will be double-tracked and will be electrically equipped for heavy haulage service.

HARBOR WORKS AND IMPROVEMENTS.—An American consular officer in a European country reports that the question of making the city in which he is located a deep-sea port and joining it with another seaport by means of a canal, together with the plan of enlarging the harbor, building docks, quays, and other improvements, has been discussed for some time, and it is thought it will be decided within the next year. The work will probably involve an expenditure of about $25,000,000, and as the government is quite ready to welcome foreign capital, and has no objection to giving the work to foreign contractors, there is no reason why American contractors should not compete. Further details of this and similar undertakings, affording an opportunity for American capitalists and contractors, can be obtained by interested firms upon application to the Bureau of Manufactures, Dept. of Commerce and Labor, Washington, D. C. (In applying for addresses refer to file No. 4960.)

CONTRACT PRICES.

(* *denotes that this work is advertised in Engineering News.*)

PAVING.—Wenatchee, Wash.—Bids were received May 3 for the improvement of Mission St., by C. C. Ward, City Engr. The bidders were: (A) Thorsig & Miley, Everett Wash.; (B) Inland Empire Hassam Paving Co., Spokane, Wash.; (C) Allen & McHerney, Wenatchee, Wash.; (D) M. C. Murphy Co., Spokane, Wash. The itemized bids were as follows:

PAVING, WENATCHEE, WASHINGTON.

	A	B	C	D
13,538 cu. yds. excavation	$0.75	$0.25	$0.62	$0.70
712 cu. yds. excavation, solid rock	1.50	2.20	2.00	1.50
10,814 sq. yds. brick pavement	3.50	...	2.95	3.26
10,814 sq. yds. asphalt pavement	2.50	...	2.40	3.25
10,814 sq. yds. creosoted block pavement	2.95	...	...	2.57
10,814 sq. yds. patent pavement	...	2.30	1.75	...
9,135 sq. yds. concrete sidewalk	1.40	1.35	1.25	1.14½
11,420 lin. ft. concrete curb	.45	.45	.50	.58
157 lin. ft. armored concrete curb	.75	.80	.65	1.00
25 M. wood gutter	24.00	25.00	25.00	26.00
24 M. wood crosswalks	24.00	25.00	25.00	26.00
20,017 sq. yds. macadam "A"	1.05	.75	.80	.65½
20,017 sq. yds. macadam "B"	1.00	.63	.80	.62
20 sq yds. alley crossings	...	2.00	1.50	1.75

PAVING AND SEWERS.—Seattle, Wash.—Bids were received April 29 by the City Engr., City of Seattle, Wash., for paving and sewer work in Western Ave. The bidders were: (A) T. Ryan, Seattle; (B) HANS PEDERSON, Seattle (awarded contract). The itemized bids were as follows:

PAVING AND SEWERS, SEATTLE.

	A	B
Abstract of title, etc., fixed estimate	$4,000.00	$4,000.00
Clearing and grubbing, lump sum	2,000.00	500.00
6,000 cu. yds. sub grading	.35	.45
11,280 lin. ft. curbing, straight, granite	1.65	1.60
880 lin. ft. curbing, curved granite	1.90	1.90
170 lin. ft. curbing, reset	.70	2.00
13,658 sq. yds. paving, brick	2.47	2.60
13,706 sq. yds. paving, sandstone	3.43	3.50
13,706 sq. yds. paving, granite, alternate	3.70	3.65
2,400 sq yds. paving, brick, alternate	2.50	2.60
140 sq. yds. paving, asphalt	2.00	2.00
25 sq. yds. gutters, brick	2.65	2.60
164 sq. yds. gutter, brick, relaid	2.00	2.60
501 sq yds. crossings, sandstone	3.43	3.50
401 sq. yds. crossings, granite, alternate	3.70	3.65
3 M. lumber crossings	21.00	25.00
1,300 sq. yds. gravel base, 4-in	.16	.30
1,300 sq. yds. concrete base, 1-in	.14	.18
7,843 sq. yds. concrete walks	.94	1.00
18 catch basins, single inlet	65.00	60.00
7 catch basins, double inlet	75.00	70.00
2 catch basins moved, single inlet	30.00	60.00
2 catch basins moved, double inlet	35.00	70.00
1 single inlet	20.00	15.00
3 inlets moved	6.00	5.00
30 catch basin covers, adjustable	2.00	15.00
12 monument cases	10.00	10.00
5 M. lumber	21.00	24.00
10 M. lumber, relaid	6.00	6.00
4 curb inlets	10.00	15.00
11 manholes, 4½ ft.	70.00	75.00
2,000 lin. ft. sewer pipe, 3-in	.15	.15
400 lin. ft. tile drain, 3-in	.15	.15
1,112 lin. ft. sewer pipe, 8-in	1.25	1.50
10 cu. yds. excavation	.75	1.00
50 cwt. coal for steam roller	.40	.50
2 gate chambers, brick	40.00	35.00
Totals:		
Granite paving, 13,706 sq. yds.; Granite alley crossings	$128,458.00	$129,781.00
Sandstone paving, 13,706 sq. yds.; Sandstone alley crossings	124,623.00	127,650.00
Brick block, 2,400 sq. yds.; Granite paving, 11,306 sq. yds.; Granite alley crossings	125,578.00	127,261.00
Brick block, 2,400 sq. yds.; Sandstone paving, 11,306 sq. yds.; Sandstone alley crossings	122,391.00	125,490.00

PAVING AND SEWERS.—Clinton, Okla.—Bids were received by J. S. O'Hearn, City Engr., for paving and sewer work May 3. The bidders were: (A) Cleveland Trinidad Paving Co., Cleveland, Ohio; (B) Heman Construction Co., St. Louis, Mo.; (C) Warner Quinland Asphalt Co., Syracuse, N. Y.; (D) Barber Asphalt Paving Co., Philadelphia. The itemized bids were as follows:

PAVING AND SEWERS, CLINTON, OKLA.

	A.	B.	C.	D.
64,096 sq. yds. sheet asphalt, 5-in. base	$2.14	$2.00	$2.11	$2.18
1,964 lin. ft. oak headers	.16	.30	.15	.12
18,898 lin. ft. concrete curb and gutter	.75	.60	.85	.87
7,269 lin. ft. concrete gutter	.45	.40	.50	.52
4,347 lin. ft. concrete curb	.45	.50	.50	.52
18,000 cu. yds. earth excavation	.39	.40	.41	.42
2,160 lin. ft. 12-in. vitrified pipe	.81	.60	.85	.80
3,280 lin. ft. 18-in. vitrified pipe	1.43	1.05	1.35	1.30
1,080 lin. ft. 21-in. vitrified pipe	1.75	1.25	1.80	1.90
2,160 lin. ft. 24-in. vitrified pipe	2.04	2.25	2.15	2.30
1,440 lin. ft. 30-in. vitrified pipe	3.25	3.20	3.50	3.75
1,650 lin. ft. 36-in. vitrified pipe	5.00	4.31	4.75	4.90
18 manholes, complete	35.00	40.00	35.00	37.50
4 lampholes, complete	10.00	10.00	10.00	8.00
71 street inlets	25.00	10.00	15.00	16.50
	$192,026	$176,669	$192,089	$198,399

HIGH PRESSURE SERVICE.—Brooklyn, N. Y.—Bids were received May 18 for furnishing pipe, valves and fittings for a high pressure fire service installation in the Gowanus and South Brooklyn districts. The bidders were: (A) Cranford Co.; (B) James H. Holmes; (C) F. V. Smith Construction Co.; (D) Hagerty & Drummond; (E) Murphy Bros.; (F) Michael J. Dady. The itemized bids were:

HIGH PRESSURE SERVICE, BROOKLYN.

	A	B	C	D	E	F
9,260 tons c.-i. pipe	$27.15	$27.50	$28.95	$29.15	$34.00	$34.45
410 tons special castings "A"	75.90	120.00	55.50	58.30	67.00	75.00
170 tons special castings "B"	75.90	50.00	55.50	58.30	58.00	75.00
25 tons special castings, steel	185.15	485.00	300.00	220.00	180.00	200.00
190 tons castings, boxes, etc.	42.00	40.00	50.00	52.80	42.60	70.00
37,500 lin. ft. 20-in. pipe	1.52	1.25	2.00	1.43	1.50	1.60
20,200 lin. ft. 16-in. pipe	1.42	.95	1.65	1.32	1.25	1.40
6,600 lin. ft. 12-in. pipe	1.07	.80	1.40	1.16	.90	1.20
3,500 lin. ft. 8-in. pipe	.93	.70	1.15	1.10	1.20	2.00
70 valves, 20-in.	270.00	345.00	300.00	330.00	275.00	350.00
42 valves, 16-in.	185.00	230.00	200.00	220.00	175.00	250.00
15 valves, 12-in.	100.00	170.00	110.00	126.50	100.00	150.00
400 valves, 8-in.	50.00	95.00	60.00	59.40	45.00	75.00
400 hydrants, hauling and setting	7.00	10.00	16.00	16.50	12.00	15.00
480 cu. yds. broken stone	2.00	.01	2.50	1.76	2.00	3.00
290 cu. yds. brick masonry	12.00	12.00	12.00	13.20	12.00	15.00
245 cu. yds. concrete masonry	8.00	8.00	4.00	11.00	6.00	7.00
35 M. timber and lumber	.01	20.00	30.00	44.00	20.00	35.00
89,000 lbs. iron and steel	.05	.05	.04½	.07	.08	.10
2,900 sq. ft. bluestone, flagging	.05	.20	.05	.04	.02	.20
3,000 sq ft. concrete, sidewalks	.20	.01	.20	.17	.15	.20
1,100 lin. ft. curbing, bluestone	.01	.01	.01	.01	.40	.20
100 sq. yds. paving, cobble	.20	.50	.30	.40	.25	.50
1,000 sq. yds. paving, Belgian block	.30	.50	.40	.55	.25	.50
9,000 sq. yds. paving, granite block on sand	.35	.50	.50	.01	.30	.50
5,000 sq. yds. paving, granite block on concrete	2.25	1.50	1.50	2.75	1.25	3.00
4,500 sq. yds. paving, asphalt	2.10	2.25	3.00	3.30	2.75	3.00
1,000 sq. yds. paving, asphalt block	3.00	2.50	3.00	2.75	3.00	3.00
100 sq. yds. paving, sandstone	2.50	2.00	3.00	4.95	3.00	3.00
100 sq. yds. paving, wood block	3.00	.01	3.00	.01	2.00	3.00
60 sq. yds. paving, slag	3.00	10.00	3.00	3.30	3.00	3.00
100 sq. yds. paving, brick	2.50	.01	3.00	.01	2.00	3.00
100 sq. yds. paving, macadam	.01	.01	.70	.01	.01	1.00
7,500 cu. yds. excavation	.25	.01	1.50	1.25	.80	1.00
400 cu. yds. rock excavation	.01	4.00	4.00	5.50	.01	5.00
75 air cocks, ½-in.	10.00	5.00	10.00	6.60	10.00	7.00
1,000 lin. ft. vitrified pipe	.50	.50	1.50	1.10	1.10	1.00
Totals	$497,697	$528,974	$557,062	$555,217	$537,338	$625,042

U. S. POSSESSIONS.

(* *denotes that this work is advertised in Engineering News.*)

RAILWAY SUPPLIES—Panama.—Bids will be received until 2 p. m., May 23, by the Panama R. R. Co., 24 State St., New York, for furnishing miscellaneous railway supplies, in accordance with terms and conditions contained in circular No. P-289.

SUPPLIES—Panama.—Bids will be received by the Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 2.30 p. m., June 1, for furnishing chain blocks, screw jacks, boiler clamps, cotters, cable, pliers, gauge glasses, leather belting, dredging sleeves, copper frames, etc.

EXAMINATIONS.

GEOLOGIST.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on June 15, to secure eligibles from which to make certification to fill a vacany in the position of Geologist specially qualified in Mesozoic and Cenozoic paleobotany in the Geological Survey, at $2,160 a year, or $7 a day, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer or promotion. It is desired to secure eligibles with a thorough scientific training and of considerable practical experience who are able to initiate and carry on independent work in the fields of Mesozoic and Cenozoic paleobotany. Applicants should submit copies of any scientific papers they may have published. If it is not possible to furnish these papers, reference should be made to the original source of publication. Attention is called to the importance of full statement, for ratings can be based only on the data furnished to the Civil Service Commission. Competitors will not be assembled for any of the tests. Age limit, 20 years. Application form 1312. Applications must be filed prior to closing hour on June 15.

INDUSTRIAL NOTES.

MR. ROBT. WETHERILL, JR., has opened an office at Room 2053, 50 Church St., New York, as district manager of Robt. Wetherill & Co., Chester, Pa.

THE AMERICAN STEEL & WIRE CO. is planning to spend, within the next two years, $2,000,000 in the enlargement of its plants in the Cleveland district.

THE GOIT MFG. CO., of Oklahoma City, Okla., reports the shipment to a Chicago purchaser of a carload of its steel dump carts for distributing and spreading concrete.

THE BAYONNE CASTING CO. has just finished building a new plant and is equipped to handle castings up to 25,000 lbs. in weight. This company makes a specialty of Monel metal castings.

MR. JOHN M. NICOL has been appointed representative for the Hammond Iron Works at their Mexican offices, Olwares Bldg., la Tacuba No. 6, Mexico City. He will succeed Mr. Francis E. Pratt.

THE CARNEGIE STEEL CO., the Republic Iron & Steel Co., and the American Car & Foundry Co. are among recent purchasers of Swartwout exhaust heads, made by the Ohio Blower Co., Cleveland, Ohio.

THE PENNSYLVANIA STEEL CO. and the Maryland Steel Co. report the removal of their Chicago offices to the McCormick Bldg., Michigan Ave. and Van Buren St. Mr. Robert E. Belknap is Chicago Sales Agent.

THE CAPITOL LIME STONE CO., Columbus, Ohio, announces that its new plant will be in operation after June 1. This is located on the T. & O. C. Ry., affording special facilities for shipping stone for ballast, concrete and road building. Fluxing stone can also be supplied.

A PERFORATED RADIAL BRICK chimney, 350 ft. high by 12 ft. internal diameter at the top, is being erected for the Standard Oil Co. at its Bayway, N. J., plant. This chimney, which is being built by Bergen & Lindeman, 170 Broadway, New York City, will be utilized for carrying off the acid fumes from the refinery.

PLANS HAVE RECENTLY been prepared by the Great Northern Railway to provide practically the whole of the Cascade Tunnel region with snowsheds. This will be a prevention against the recurrence of disasters similar to the Wellington. The plans not only include continuous snowsheds, but these will be widened at intervals to provide passing and meeting sidings.

THE POWER SPECIALTY CO. announces that its Chicago office has been moved to the Peoples Gas Bldg. The office is in charge of Mr. R. B. Nutting, assisted by Mr. R. H. Wyld, who has the title of assistant manager. The company reports that the volume of Foster superheater sales is rapidly increasing, the contracts secured so far this year nearly equaling the total of last year's business.

WARREN BROTHERS CO. and subsidiary companies have recently taken contracts for bitulithic pavements as follows: Lewiston, Idaho, 17,974 yds.; Portland, Ore., 76,912 yds.; Kansas City, Mo., 13,706 yds.; Dallas, Tex., 15,129 yds.; Boston, Mass., 3,830 yds. A contract to lay 9,386 yds. of Warrenite for the Stubenville Pike, Allegheny County, Pa., has also been made.

WATER SOFTENING and purifying systems have been, or are about to be installed by Wm. B. Scaife & Sons Co., Pittsburg, Pa., in plants of the River Furnace & Dock Co., Cleveland, Ohio; the New York & New England Cement & Lime Co., Hudson, N. Y.; Spencer, Kellogg & Sons, Buffalo, N. Y., and the Vandergrift Works of the American Sheet & Tin Plate Co. This last installation will be for boilers rated at 15,000 HP.

LABORERS TO THE EXTENT of 5,000 men are wanted for railroad work in the Northwest, according to the "Portland Oregonian." The wages paid for common laborers range from $2.75 to $3 per day. The contractors of the Pacific Railroad & Navigation Co. need 1,500 men. Porter Bros. have employment for 2,500 men on the Oregon Trunk. The Harriman roads want 2,000 men, and H. C. Henry, General Contractor, needs the same number.

THE OHIO STEAM SHOVEL AND DUMP CO., Cincinnati, Ohio, reports that sales have recently been made of six of its Model 30 traction steam shovels, two Model 50, Ohio 2-yd. dipper and one 70-ton 2½-yd. dipper Ohio steam shovel. The company also advises that it can make immediate shipment of either Model 30 traction, or 55-ton 2-yd. dipper steam shovels, and can deliver its 70-ton Ohio Shovels with 2½ or 3-yd. dippers with combination wood and steel, or all steel, booms in 20 to 30 days.

THE BROOKLYN SUBWAY, or more commonly known as the Fourth Ave. subway, is now well under way. This piece of work is divided into six contracts, and according to statement issued by the Public Service Commission 163,000 cu. yds. were excavated up to April 20. The most work has been done on Section 2 on the Flatbush Ave. extension. On Section 5 only a little work has been done, and it will be necessary to wait until the sewers, watermains, and gas supply pipes have been removed.

AT THE ANNUAL MEETING of the stockholders of the Cement Products Exhibition Co., held in Chicago, May 10, the report of the treasury showed that there was a surplus of $785 resulting from the third annual cement show held Feb. 18th to the 26th. The total expenses of the exhibition were $41,721. A similar exhibition will be held in Madison Square Garden, Dec. 14th to 20th this year. The officers of the Association were re-elected as follows: President, Edward M. Hagar; Vice-President, Norman D. Fraser; Secretary and Treasurer, J. U. C. McDaniel.

THE OFFICES of the Long Island Railroad will be removed about Aug. 1 to the new Pennsylvania Terminal Building in Manhattan and the new 2-story building now in course of erection at Jamaica. The officers who will go to Manhattan are the President, General Superintendent, Real Estate Agent, Purchasing Agent and Electrical Superintendent. The building at Jamaica will house the Division Superintendent, Dispatchers, Trainmen, Paymaster, Superintendent of Police and other officers.

ONE OF THE LARGEST ELECTRICAL and hydro-electric equipment orders ever placed in a single complete contract in this country, so it is said, was taken by the Allis-Chalmers Co., Milwaukee, Wis., from the Northern California Power Co. covering hydraulic turbine machinery and all electrical machinery for its plant on Battle Creek, Shasta County, California. This order includes three 7,000-HP. single horizontal hydraulic turbines connected to three 5,000-KW. generators; also two 350-HP. single-phase exciter turbines.

RECENT INTEREST in the railway world has developed in the mineral and natural resources held by many railways. These in general consist of lands which were obtained by the Transcontinental lines as subsidies. The Southern Pacific has, it is authoritatively stated, a large equity in oil lands. The St. Paul is supposed to have many millions of hidden assets in timber lands, and the same is true of the Northern Pacific. Ever since the Great Northern leased its ore lands to the Steel Corporation, these hidden equities have aroused much interest.

A MISCONCEPTION REGARDING the sale of a portion of the Russian plant of the New York Air Brake Co. has recently appeared in the daily papers. The New York Air Brake Co. has recently sold to the International Harvester Co. its Moscow plant. This was because of the falling off of business for air brakes in the Russian railways, but the New York Air Brake Co. still retains its right to manufacture air brakes and appliances, and will resume operations as soon as the financial condition of the Imperial Government permit the rehabilitation of the Russian roads.

A PENSION FUND for the employees of the United States Steel Corporation was announced last week by Judge Gary, Chairman of the Board of Directors. This fund will amount to $8,000,000, and by an agreement with Mr. Andrew Carnegie, will be consolidated with the $4,000,000 heretofore created by him. The entire amount will be known as "The U. S. Steel and Carnegie Pension Fund." The handling of the funds will be administered by a board of twelve trustees for the benefit of employees of all subsidiary companies. The details of the scheme have not been worked out yet, but they will probably be announced later.

THE INTERNATIONAL ACHESON GRAPHITE CO. has established the following branch offices: Room 511, West St. Bldg., New York City; 457 Monadnock Block, Chicago, Ill., and 309 Fourth Ave., Pittsburg, Pa. Gredag is the trade name adopted by the company for its graphite grease, in order that it may be distinguished from other grease products. The graphite used is an electric furnace product. As it is soft and unctuous, this graphite is a notable lubricant in itself, but in Gredag are combined the advantages of both graphite and grease, the combination making a lubricant of exceptional quality and value.

DECENTRALIZATION OF IMPORTANT works is believed by many to be a remedy for some of the labor troubles. It is worthy to note that some of the greatest labor difficulties that have ever arisen among industrial employees in this country have been where practically all the workmen in one community were employed in kindred lines of work. Commenting on this the following extract is taken from the report of an official of the General Electric Co.: "The policy of decentralization, referred to in my last report, has been continued with most satisfactory results, and the systems for controlling stock, working progress and labor course have been further improved and have resulted in economic administration of a gratifying nature."

BREAKING STRENGTHS of wire ropes will, in the future, be given by manufacturers as the result of actual test. The method employed in the past has been to determine the actual strength of a single wire and multiply this by the number of wires in the strand. According to the "American Wire Rope News," there is about 10% loss when the wires are laid into a rope. "The reason for this loss is because of the indirect pull upon the wires and further, because all the wires are not always under the same stress at the same time. To secure flexibility and durability, the laying of the wires into rope form necessarily carries with it a loss of strength. Yet the practice of all manufacturers and users of wire rope in this country has ever been to make calculations upon the strengths of the wires rather than upon their actual capacity when twisted and shaped into a rope."

THE ELECTRICAL INDUSTRY has not recovered from the depression with the rapidity noted in other lines of trade. The report of the General Electric Co. shows that the total sales billed during the eleven months ending Dec. 31, 1909, were $51,000,000 compared with $60,000,000 in the year 1907, and $71,000,000 in 1908. On the other hand, however, the demand is improved, for during the years ending with Jan. 31, 1908 and 1909, the amount of sales billed exceeded the amount of orders received. During the eleven months ending Dec. 31 last, however, the orders received were larger than the sales billed, indicating an increase in the coming year. At the same time it is significant to note that the employees on Dec. 31, numbering 30,000, exceeded the previous high record by 2,000. The floor space occupied in manufacturing is larger by nearly 50% than it was preceding the panic of 1907.

TAKING ADVANTAGE of the opportunity offered by the low-pressure steam turbine when used in connection with the exhaust of other prime movers, for increasing plant output without requiring additional boiler capacity, the Baldwin Locomotive Co. is installing three 500-KW. low-pressure units at its Philadelphia works. These turbines will utilize the exhaust steam from Westinghouse compound reciprocating engines already installed in the large power plant of those shops, making available considerable additional power, and effecting economical improvement in operation of this station. The increasing shop demands on the power house, following the return of business, required this additional power equipment, and in making extensions along these lines, sacrifice of the existing steam generating apparatus, which is in good condition, has been avoided.

ONE OF THE LARGEST car orders placed this year, so it is said, has recently been given to the Orenstein-Arthur Koppel Co., Pittsburg, Pa., by the Jamison Coal & Coke Co., Greensburg, Pa. These cars are to be used in the new mines recently opened by this company in the Westmoreland fields. The coal company has been experimenting for several years with many coal cars with the view of securing actual data relative to the life, maintenance and transportation costs of the several kinds of cars, and the placing of their orders is the result of these experiments. The cars to be furnished on the recent order from the Greensburg operator are of special design, of all steel construction, with steel wheels and roller bearings. These cars are to be 100 cubic ft., or 3-ton capacity, having 44-in. gage. The order, which is but one of many recently received by the company, is for over 900 cars.

THE BAYONNE STEEL CASTING CO., whose main office is at 30 Church St., New York, has purchased a site at Bayonne, N. J., and will proceed to erect a plant for the manufacture of steel castings. The site was selected after much careful consideration. The location enables the company to have shipping facilities on three railroads and by water, it being within the free lighterage district of the harbor of New York. The equipment of the plant will include motor trucks for the delivery of castings where they may be urgently needed in the vicinity. It expects to turn out from 400 to 500 tons per month of small and moderate sized castings. It will probably have the largest production of converter steel castings of any foundry in the United States. The main foundry building will have 30,000 sq. ft. of molding floor. Other buildings of ample proportions will be erected for cleaning, sand blasting, pattern storage and other uses. As the site comprises five acres, there will be considerable room for expansion.

REGULATING THE USE of water for power purposes at Niagara Falls is the subject of a recent treaty between Great Britain and the United States. By the terms of the treaty the Canadian side is to be permitted the use of 36,000 cu. ft. per sec., while the New York side will be allowed to use 20,000 cu. ft. per sec. The amount allotted to the Canadian side will make possible a much larger development than is now in use, but as the developing companies are permitted, by the Canadian as well as by the United States authorities, to transmit and sell in the United at least half of the power generated in Canada, the New York side is benefited by the Canadian development. The 20,000 cu. ft. allotted to the power companies on the New York side will make possible for the Niagara Falls Power Co. and the Niagara Falls Hydraulic Power & Mfg. Co. to perfect their developments as originally planned. It will also leave a small amount of water for use in Lockport, where one company has a development to effect which water is diverted from the Erie Canal.

MONEL METAL PROPELLERS for the two Dreadnought type Argentine Republic battleships are now being cast by the Bayonne Casting Co., Bayonne, N. J. In all, twelve screw propellers will be made. The two battleships are being built by the Fore River Shipbuilding Co., and the New York Shipbuilding Co. These two ships will be the largest battleships of the Dreadnought type afloat. The designers of the propellers investigated thoroughly the question of Monel metal and reached the conclusion that the wheels could be made much lighter in section and in the hubs, on account of the strength of Monel metal. It is customary when building propellers of this size in bronze, to cast the blades separately, which necessitates a large amount of machining and fittings and large cumbersome hubs. The Monel metal propellers will be cast in one piece, being approximately 14 ft. in diameter and will weigh 16,000 lbs. each. On account of the lighter sections of hubs and blades, the builders of the boats are convinced that the speed will be materially increased with less power, and as the boats were taken on a bonus basis, this item is of considerable importance.

THE DUMPY LEVEL, which has l[ong] been a favorite with English engineers, h[as] many staunch supporters and has steadi[ly gr]own in favor in this country. At prese[nt t]here is a considerable demand for such in-strument. The compactness of the [Dum]py level and its capacity to stand hard [kno]cks and give reliable service in rough co[untry] or when carried over rough trails acco[unt] in a large degree, for its popularity. T[he rail]road Dumpy level, recently develo[ped and] placed on the market by Keuffel & E[sser,] 127 Fulton St., New York, present[s ... the] novel features, which are of interest. [This] instrument is unusually compact. It [is pro]vided with a 12¼-in. telescope, very [rigid]ly supported, and by a new arrangement [of the] telescope supports, a considerably [larger] spirit level is employed than is usually [fur]nished with instruments of this size. [The] bar is made of gun metal and shaped to [com]bine greatest strength with least w[eight,] while the general construction is such [th]at the whole instrument is brought closer [to the] tripod plate than is ordinarily the case. [The] barrel of the telescope and its supports, the tube of the spirit level and the bar are [fin]ished, while the leveling arms and [tripod] plate are enameled.

AMERICAN RAILWAYS have, in the [l]ast ten days, succeeded in securing large [lo]ans from foreign sources. For some time [th]ere has been a deadlock in the bond market, and it was difficult to float even the be[st] of securities. Some of the older bonds of undoubted security and exceptional investment value had fallen to low figures. With the placing, however, of substantial new loans in Europe, the bond market here has slightly recovered, especially for the good issues. Among the railways which have succeeded in selling securities abroad are the Chicago, Milwaukee & St. Paul, which has disposed of $50,000,000 15-year 4% debentures. The Missouri, Kansas & Texas has sold to a foreign banking house $10,000,000 of 4% debentures. A sale of development bonds of the Southern Railway was made to German bankers. The Big Four has sold in Paris $10,000,000 of 4% debentures. The Baltimore & Ohio has resorted to the expedient so common in 1906 of selling short time securities. It sold $14,000,000 of three-year notes. Revenue warrants of New York City are likewise being placed abroad. The National Railways of Mexico have succeeded in having listed in the official department of the Paris Bourse, the "Parquette," its $125,000,000 second preferred stock. The Chicago & Alton will issue new bonds to the extent of $18,000,000.

THE HILL LINES, or what might be better called James J. Hill and associates, continue aggressive work in the Northwest. Recent announcement has been made of the acquisition by Mr. Hill and his associates of the Oregon Electric Railway, an interurban line operating between Portland and Salem, and between Garden Home and Forest Grave, in all about 70 miles in length. This road is built on practically steam railroad standards and almost parallels the Southern Pacific. The two competitors, the Hill and Harriman forces, are likewise pushing up the canyon of the Deschutes River. These roads will run, from junction with the respective lines on the Columbia River, southward between the 121st and 122d meridian to the Klamath Indian Reservation. This will open up an immense territory rich in timber. In all this region there are no railway facilities. In fact, there are no railways in the territory west of the Cascade range, south of the 45th parallel and north of the 42d parallel east to the Idaho State line, except for some short lines in Baker County.

Another important factor that should not be overlooked is that this route may afford the Hill lines a direct entrance to San Francisco. The Southern Pacific will undoubtedly connect this new branch with its line at Klamath Falls in southwestern Oregon, giving it a route west of the Cascade range.

A MARKED SAVING in the cost of insurance was made by the Public Service Corporation of New Jersey through the installation of automatic sprinklers and other fire-fighting appliances. The risk was especially hazardous as the company is the principal traction company in New Jersey. The saving is summarized in President Thomas N. McCarter's report as follows:

"On July 1, 1903, the amount of insurance in force on the properties controlled by the corporation was $9,455,000, and the annual premium thereon was $122,400, or an average of $1.29 per hundred dollars of insurance. At the present time the insurance carried amounts to $20,273,000, and the annual premium thereon is $122,909, or an average rate of 60 cts. per $100. Thus the total amount of insurance carried has been more than doubled for practically the same premium. The total losses occurring during the same period aggregated $158,600, of which all but $22,500 was covered by insurance.

"To secure these results the corporation has authorized, up to the present time, the expenditure of approximately $200,000 for minimizing the fire hazard by installing fire extinguishers, sprinkler systems, fire hose, fire doors, parapet walls, concrete floors, etc. It is expected that additional substantial economies will be obtained in the near future, either through the further lowering of rates by the insurance companies, or the establishment of a self insurance fund which the corporation has now under consideration."

CEMENT PRODUCTION IN 1909.—The preliminary estimate of the production of cements in the United States in the year 1909 has been prepared by Mr. Ernest F. Burchard, of the United States Geological Survey. The annual statistics of the mineral production of the United States are ordinarily collected by the Geological Survey only, but those for 1909 are being collected by the Survey in co-operation with the Bureau of the Census, in order to avoid annoyance to miners, manufacturers, and others by duplicate requests from government bureaus. This co-operative arrangement will necessarily result in considerable delay in the publication of the report on

the cement industry for 1909 and for that reason many manufacturers requested the Survey to collect the data on cement in the usual manner. The Director of the Census approved the course requested, and accordingly the usual inquiries were sent by the Survey to cement producers. Owing to the conditions stated, these requests were sent out more than two months later than last year but replies have now been received from about 88 per cent. of the Portland cement companies in the United States.

As shown by the quantities reported in the replies received, to which has been added the estimated output of the small number of producers who have not yet responded, the production of Portland cement in 1909 was between 61,300,000 bbls. and 62,000,000 bbls., which, valued at 85 cts. a bbl., was worth at the mills between $52,105,000 and $52,700,000. This represents an increase in quantity of at least 10,227,000 bbls. and in value of at least $8,557,000 over the production in 1908, which amounted to 51,072,612 bbls., valued at $43,547,679. The increase in quantity was therefore at least 20% over that of 1908. The reported selling price per barrel averaged the same as in 1908—about 85 cts.—although Portland cement was sold during the summer of 1909 at a figure so low as to cause a general expectation that the average price for the year would fall below that of 1908.

The return for the production of natural cement are not yet quite so complete as those for Portland cement, but they indicate that the total production in 1909 was not far from 1,500,000 bbls., valued at about $675,000, an average value of 45 cts. a bbl. These figures show a slight decrease as compared with those for 1908, when the production was 1,686,000 bbls., valued at $834,509.

The production of puzzolan cement, as reported, shows a slight increase, about 160,646 bbls., valued at $99,453, having been produced in 1909, as compared with 151,451 bbls.

J. G. WHITE & CO., INC., 43-49 Exchange Pl., New York City, in its annual report calls attention to the fact that at the present time the company has no contracts on hand other than those on a cost plus, a fee basis and the subsidiary and affiliated companies also have no fixed price contracts.

A branch office was established in Chicago last year in charge of C. T. Mordock, Manager. This followed the establishment of a similar office in San Francisco, H. A. Lardner, Manager, which is very successful. Commenting on future work for engineers, President J. G. White says in his report:

"Believing that much rich land in the United States will be reclaimed by drainage during the next decade, we have arranged to have a special Engineering Division for this work, equal to any in the country.

"Some important reclamation work of this sort is already in hand.

"Increased attention is also being given to industrial engineering.

"In addition to important steam railroad, steam power plant, street railway, gas and other varied work, your company is carrying out an exceptionally large number of important hydro-electric and irrigation developments. In these lines of work we now have an unusually large and experienced staff of engineers and construction men."

The truth of this last statement is well shown in the following list of officers and staff:

J. G. White, President; F. H. Reed, 1st Vice-President; L. N. Farnum, 2d Vice-President; G. W. Bunnell, Assistant to 2d Vice-President; R. B. Marchant, Treasurer; R. E. F. Flinsch, Assistant Treasurer; H. S. Collette, Secretary; L. R. Schenck, Assistant Secretary; A. C. Thompson, Assistant Manager New Business Department; E. N. Chilson, Purchasing Agent; E. G. Williams, Construction Manager; W. McM. North, Assistant to Construction Manager; B. C. Donham, Construction Supervisor; C. A. D. Bayley, Construction Supervisor; H. Q. Kennedy, Construction Supervisor; A. W. K. Billings, Engineering Manager; H. W. Butler, Assistant Engineering Manager; A. S. Crane, Chief Hydraulic Engineer; A. Adams, Assistant Hydraulic Engineer; A. A. Conger, Assistant Hydraulic Engineer; I. W. McConnell, Chief Irrigation Engineer; N. C. Grover, Irrigation Engineer; Guy Sterling, Irrigation Engineer; D. C. Henny, Consulting Irrigation Engineer; S. D. Sprong, Chief Electrical Engineer; C. D. Gray, Assistant Electrical Engineer; T. F. Richardson, Civil Engineer; J. W. Burke, Civil Engineer; F. W. Gay, Mechanical Engineer; H. J. Douds, Commercial Engineer; C. E. Bailey, Manager Engineering Reports; A. J. Bemis, Reporting Engineer; G. H. Throop, Reporting Engineer; J. H. Pardee, Operating Manager; K. B. Thornton, Electric Light and Power Engineer; L. H. Conklin, Electric Light and Power Engineer; C. A. Greenidge, Electric Light and Power Engineer; W. E. Barrett, Gas Engineer.

TRADE PUBLICATIONS.

WATER PURIFYING APPARATUS.—The Kennicott Water Softener Co., Chicago Heights, Ill. Paper; 3¼ × 6 ins.; pp. 16; illustrated.

In this flyer attention is called to a wide variety of apparatus for softening and otherwise purifying apparatus for industrial plants.

STEAM AND AIR FLOW METERS.—General Electric Co., Schenectady, N. Y. Bulletin 4720. Paper; 8 × 11 ins.; pp. 12; illustrated.

The meters described in this bulletin are essentially an arrangement of U-tubes filled with mercury and having their proper arms connected to leading and trailing sets of pitot tubes inserted in the steam or air main. The bulletin shows the construction of the indicating and recording types of meters and gives directions for their use.

(Continued on page 216.)

LIST OF CONTRACTS PENDING.

Light, Heat and Power Plants.

		Noted in issue of
5-20	Elec. light system, Fort Missoula, Mont.	5- 5
5-20	Lighting system, Ft. Dade, Fla.	5- 5
5-21	Power plant, Washington, D. C.	4-21
5-21*	Heating apparatus, etc., Toronto, Ont.	5-12
5-23*	Elec. light system, Fort Morgan, Ala.	4-28
5-25	Power plant, Fort Caswell, N. C.	5- 5
5-25	Eqpipment, etc., Winnipeg, Man.	5-12
5-25	Transformer station, Port Arthur, Ont.	5-19
5-26	Boilers, etc., Medford, Okla.	5- 5
5-28	Elec. light system, etc., Fort Bayard, N. Mex.	5-12
5-31	Elec. light system, Fort Crockett, Tex.	5-12
5-31	Elec. equip., New York	5-19
6- 1	Heating plants, etc., Birmingham, Ala.	5-19
6- 1	Equipment, Elizabethtown, Tenn.	5-19
6- 2	Elec. light system, Fort McKinley, Me.	5-12
6- 4	Heating systems, etc., Boston, Mass.	5-12
6- 6	Heating system, Fort Logan H. Roots, Ark.	5-19
6- 6*	Elec. lighting system, Fort Andrews, Mass.	5-19
6- 8	Lighting plant, La Moure, N. Dak.	5-12
6-11	Substation, Charleston, S. C.	5-12
6-11	Piping, etc., Charleston, S. C.	5- 5
6-30	Power plant, Cisco, Utah	5-19

Bridges.

5-20	Bridge work, Buffalo, N. Y.	5-19
5-21	Bridge work, Cleveland, Ohio	5- 5
5-23	Superstructure, Niles, Ohio	5- 5
5-23	Bridge, Hubbard, Ohio	5- 5
5-23	Bridge, Newmarket, Ont.	5-19
5-23	Bridge, Worden, Ill.	5-19
5-23	Superstructure, Urbana, Ohio	5-19
5-23	Bridges, Medina, Ohio	5-19
5-23	Culvert, Fulton, N. Y.	5-19
5-24	Bridges, Rushville, Ind.	5-19
5-24	Bridges, Wauseon, Ohio	5-19
5-24	Bridge, Oil City, Pa.	5- 5
5-24	Bridge work, Columbus, Neb.	5-12
5-25*	Bridge, Dayton, Ohio	5-12
5-25	Bridge, Van Wert, Ohio	5- 5
5-25	Bridge work, Cleveland, Ohio	4-28
5-25	Bridge, Spartanburg, S. C.	5-19
5-26	Bridge work, Arvilla, W. Va.	5-12
5-28	Bridge, Quincy, Ill.	5-12
5-28	Bridge, Lacy, Colo.	5-19
5-28	Bridge, Una, Colo.	5-19
5-28	Bridge, Watertown, Wis.	5-19
5-31	Bridges, Arcadia, Tex.	5-19
5-31	Bridge, Barton, Ohio	5-19
6- 1	Bridges, Butler, Pa.	5-19
6- 1	Bridge, McCook, Neb.	5-12
6- 1	Bridge, Gretna, La.	3-24
6- 1	Substructure, Whiterocks, Utah	3-10
6- 2	Bridges, Lincoln, Neb.	5-19
6- 2*	Test borings, New York	5-19
6- 3	Bridge, Taylor Falls, Minn.	5-12
6- 6	Bridge, Jeffersonville, Ind.	5-12
6- 6	Bridges, Crown Point, Ind.	5- 5
6- 8	Bridges, Troy, Ohio	5-19
6-20	Bridge, Greenfield, Ind.	5-19
6-21*	Bridge work, St. Louis, Mo.	5-19
6-28*	Bridge, Winnipeg, Man.	5- 5
7- 5	Bridge, Stevenson, Wash.	5-12

Buildings.

5-20*	Sheds, New Orleans, La.	4-28
5-20	Quarters, Galveston, Tex.	4-28
5-20*	Screens, etc., New London, Conn.	5- 5
5-21	Rebuilding, Portsmouth, N. H.	4-14
5-23	Post-office, Delaware, Ohio	4-28
5-23	Laundry, Cheyenne, Wyo. (Mfg. Pl.)	5-12
5-23*	Laundry, Ft. D. A. Russell, Wyo. (Mfg. Pl.)	5-12
5-23	School, New York	5-12
5-24	Quarters, Ft. Leaenworth, Kan.	5- 5
5-25*	School, Long Branch, N. J.	5- 5
5-25	Post-office, Griffin, Ga.	4-28
5-25	Buildings, Des Moines, Ia.	5-19
5-26	High school, Haileyburg, Ont.	5-19
5-26	Post-office, North Yakima, Wash.	4-21
5-26*	School, Long Branch, N. J.	5-12
5-27	Barracks, Ft. Winfield Scott, Cal.	5- 5
5-27*	Quarters, Ft. Monroe, Va.	5- 5
5-28*	Stable, etc., Ft. Meade, S. Dak.	5-12
5-28	Quarters, Ft. Bayard, N. Mex.	5-19
5-28	Warehouse, Toronto, Ont.	5-19
5-31*	Ice plant, Whipple Barracks, Ariz. (Mfg. Pl.)	5- 5
5-31*	Post-office, Keene, N. H.	4-28
5-31*	Storehouse, Whipple Bks., Ariz.	5-12
5-31	Schools, New York	5-19
6- 2	School, Bluffton, Ind.	5-19
6- 2	Post-office, Carrollton, Mo.	5- 5
6- 4	Ice plant, Ft. Sam Houston, Tex. (Mfg. Pl.)	5-12
6- 4	Laundry, Ft. Sam Houston, Tex. (Mfg. Pl.)	5-12
6- 6*	Elevators, New York	5- 5
6- 7	Post-office, Fremont, Neb.	4-28
6- 8*	Buildings, Ft. D. A. Russell, Wyo.	5-19
6- 9*	Post-office, Middletown, N. Y.	5- 5
6- 9*	Plumbing, Madison Barracks, N. Y.	5-12
6- 9	Quarters, Plattsburg, N. Y.	5-19
6-11	Elevators, Omaha, Neb.	5-19
6-11*	Stable, Madison Barracks, N. Y.	5-19
6-11	Nurses' quarters, New York	5-12
6-13	Boiler plant, Pittsburg, Pa.	5- 5
6-13*	Bakery, Madison Baracks, N. Y. (Mfg. Pl.)	5-19
6-14	Post-office, Asbury Park, N. J.	5-12
6-15	Alterations, etc. San Francisco, Cal.	5-12
6-15	Schools, Magnolia, Ark.	5- 5
6-15*	Building, Cincinnati, Ohio	5-19
6-16*	Plumbing, Charleston, S. C.	5-19
6-16*	Guardhouse, Ft. Strong, Mass.	5-19
6-20*	Post-office, Columbus, Ind.	5-19
7- 1	Plans, New Orleans, La.	3-17

Water-Works.

		Noted in issue of
5-20	Filtration plant, Niagara Falls, N. Y.	5- 5
5-20	Wells, Fort Keogh, Mont.	5-19
5-20	Water pipe, Springfield, Ohio	5-19
5-20	Water pipe, Springfield, Ohio	5-19
5-21	Water pipe, De Kalb, Ill.	5-19
5-22	Dam, Bloomington, Ind.	5-19
5-23	Pipe, etc., Essexville, Mich.	5-19
5-23*	Boilers, Fort DuPont, Del.	4-28
5-24*	Tunnels, etc., New York	5-12
5-25	W.-wks. extension, Dows, Iowa	5-12
5-25	Water-works, Searcy, Ark.	5-12
5-25*	Dam, etc., Creede, Colo.	4-21
5-25	Water pipe, Newton, Mass.	5-19
5-25	Water mains, New York	5-19
5-26	W.-wks. impvts., Lorain, Ohio	5- 5
5-26	Reservoir, etc., Riverside, Ala.	5- 5
5-28	Water system, Ft. Ward, Wash.	5-12
5-31	Concrete flue, North Tonawanda, N. Y.	519
6- 1	Water works, Mt. Pleasant, Tenn.	5-19
6- 1*	Dam, Fort Meade, S. Dak.	5- 5
6- 1	Reservoir, North East, Md.	4-14
6- 3*	Dam work, Danville, Ill.	5-19
6- 4	Water-works addition, etc. Fort Williams, Me.	5-19
6- 6	Steel tank, Fort Logan H. Roots, Ark.	5-19
6- 6	Distr. system, Ft. Missoula, Mont.	5-19
6- 6	Reservoir, Jacksonville, Fla.	5- 5
6- 7	Reservoir, Waterbury, Conn.	5-12
6- 7	Water-works, ext., Havelock, Neb.	5-19
6- 8*	W.-Wks. material, Athens, Tex.	5-19
6-10	Reservoir, Fort Sill, Okla.	5-19
6-14	Water main, Cleveland Heights, Ohio	5-19
6-14*	Pump station, Detroit, Mich.	4-21
6-15	Filter, Clarksburg, W. Va.	5-19
7- 8	Canal enlargement, Boise, Idaho.	5-19

Sewers.

5-19	Sewer system, Margate City, N.J.	5-19
5-20	Sewer system, St. John, Kan.	5-12
5-20*	Sewers, Hackensack, N. J.	5- 5
5-20	Sewer, Cedar Falls, Iowa	5-12
5-21*	Sewer, St. Louis, Mo.	4-28
5-21	Sewers, Prescott, Ont.	5-19
5-23	Sewer, Fargo, N. Dak.	5-19
5-23	Sewers, New Haven, Conn.	5-19
5-23	Sewers, Aberdeen, S. Dak.	5- 5
5-23	Sewer, Brush, Colo.	5-12
5-23	Sewers, Wash., D. C.	5-12
5-24	Sewer, Cleveland Heights, Ohio	4-28
5-24	Sewer bonds, Baldwin, Kan.	5-19
5-24	Sewers, Osage City, Kan.	5-19
5-24	Sewers, Morristown, Tenn.	5-19
5-25	Sewers, Brooklyn, N. Y.	5-19
5-25	Sewers, Searcy, Ark.	5-12
5-25*	Sewers, Baltimore, Md.	5-12
5-26*	Sewers, etc., No. Andover, Mass.	5-12
5-26	Lumber, New York	5-19
5-26	Sewerage ext., Ft. Frances, Ont.	5-19
5-26	Sewers, Long Island City, N. Y.	5-19
5-27	Sewer, Seattle, Wash.	5-12
5-27	Sewers, Youngstown, Ohio	5-12
5-28	Drainage impvt. work, Leamington, Ont.	5-19
5-30	Sewers, Regina, Sask.	5-19
5-30	Sewers, Fort Mansfield, R. I.	5-19
5-31*	Sewer, St. Louis, Mo.	4-28
6- 1	Sewers, Amsterdam, N. Y.	5-12
6- 1	Sewer system, Fort Wingate, N. Mex.	5-12
6- 1	Sewer system, Independence, Ore.	5-19
6- 1	Sewer system, etc. Waukon, Ia.	5-19
6- 1	Sewers, Norwalk, Ohio	5-19
6- 3	Sewer, Appleton, Wis.	5-12
6- 4	Sewer additions, Ft. Williams, Me.	5-19
6- 6*	Sewers, Plainfield, N. J.	5-12
6- 7	Sewer, St. Louis, Mo.	5-12
6- 7	Sewers, Havelock, Neb.	5-19
6- 7*	Sewage pump station, Chattanooga, Tenn.	5-19
6- 8	Sewers, Princeton, W. Va.	5- 5
6-14	Sewer, St. Louis, Mo.	5-12
6-21*	Sewer, St. Louis, Mo.	5-19

Streets and Roads.

		Noted in issue of
5-20	Road, Concord, N. H.	5-12
5-20	Street impv't, St. Louis, Mo.	5-12
5-20	Road, Cincinnati, Ohio	5- 5
5-20	Roads, Concord, N. H	5- 5
5-21	Paving, Fernandina, Fla.	5-19
5-21	Macadam, Delaware, Ohio	5-19
5-21	Paving, etc., Lincoln, Neb.	5-19
5-23	Roads, Hartford, Conn.	5-19
5-23	Plank road, Hackensack, N. J.	5-19
5-23	Paving, Cincinnati, Ohio	5-19
5-23	Paving, De Pere, Wis.	5-19
5-23	Paving, Wash., D. C.	5- 5
5-23	Roads, Indiana	4-21
5-23	Stone road, Jeffersonville, Ind.	4-14
5-24*	Road, Rockport, Me.	5- 5
5-24	Paving, Manhattan, Kan.	5-12
5-24	Road, Augusta, Me.	5-12
5-24	Road, Wilmington, Del.	5-12
5-24	Paving, etc., New York	5-19
5-24	Macadam, Scranton, Pa.	5-19
5-24	Roads, Hamilton, Ohio	5-19
5-24	Macadam, Ironwood, Mich.	5-19
5-26	Stone, gravel, New York	5-19
5-26	Paving, New York	5-19
5-26	Roads, Bluffton, Ind.	5-19
5-25	Road, Beaver, Pa.	5-12
5-25	Paving, Bethany, Mo.	4-28
5-25	Roads, etc., Columbus, Ohio	5- 5
5-25	Paving, New York	5-12
5-26*	Macadam, Somerville, N. J.	5-12
5-26	Paving, Bloomington, Ill.	5-19
5-26	Paving, Ottumwa, Ia.	5-19
5-26	Road, Mt. Gilead, Ohio	5-19
5-27	Sidewalks, etc., Struthers, Ohio.	5-19
5-27	Paving, Watertown, Wis.	5-19
5-27*	Roads, Albany, N. Y.	5-12
5-27	Sidewalks, Valparaiso, Ind.	5-12
5-27	Gravel road, Wabash, Ind.	5- 5
5-27	Sidewalks, Grand Rapids, Mich.	4-28
5-28*	Paving, Boise, Idaho	5- 5
5-28*	Road, Montvale, N. J.	5-12
5-30	Macadam, Ft. Terry, N. Y.	5-19
5-31	Roads, etc., Ft. McKinley, Me.	5-19
5-31	Limestone, St. Clairsville, Ohio	5-19
5-31	Paving, Osage, Ia.	5-19
5-31*	Roads, etc., Ft. Hancock, N. J.	5-12
5-31	Roads, Pittsburg, Pa.	5-12
6- 1	Roads, etc., Fort Screven, Ga.	5-12
6- 1	Macadam, Pleasant Ridge, Ohio	5-19
6- 1	Paving, New York	5-19
6- 3	Road, Mt. Gilead, Ohio	5-19
6- 4	Paving, Racine, Wis.	5-19
6- 6	Roadway, Portland, Mt.	5-19
6- 6	Road repairs, Albany, N. Y.	5-19
6- 6	Grading, Perth Amboy, N. J.	5-19
6- 6	Road, Wauseon, Ohio	5-19
6- 6	Road, Kentland, Ind.	5-19
6- 6	Gravel road, Williamsport, Ind.	5-12
6- 6	Stone road, Vernon, Ind.	5-12
6- 6	Gravel roads, Tipton, Ind.	5-12
6- 6	Gravel road, Crawfordsville, Ind.	5-12
6- 7	Paving, Billings, Mont.	5-12
6- 7*	Paving, Jackson, Miss.	5-12
6- 7	Gravel road, Bloomfield, Ind.	5-12
6- 7	Gravel road, Williamsport, Ind.	5-12
6- 7	Macadam, Trenton, N. J.	5-19
6- 7	Road, Monticello, Ind.	5-19
6- 7	Road, Marion, Ind.	5-19
6- 7	Roads, Wabash, Ind.	5-19
6- 8	Road, Muncie, Ind.	5-19
6- 8	Paving, Princeton, W. Va.	5-12
6- 8	Gravel roads, Peru, Ind.	5-12
6- 9	Road, Logansport, Ind.	5-12
6- 9	Macadam, Ft. Sam Houston, Tex.	5-19
6-11	Road, Vincennes, Ind.	5-19

Miscellaneous.

5-19	Cable, wire, Wash., D. C.	5-19
5-20	Jetties, etc. So. Chatham, Mass.	5-19
5-20	Culverts, Cincinnati, Ohio	4-28
5-20*	Sheds, New Orleans, La.	5- 5
5-20	Removing dead animals (garbage), St. Louis, Mo.	5-12
5-21	Drainage ditches, Santa Ana, Cal.	5-12
5-21	Wreck removal, Plymouth, Mass.	4-28
5-23	Castings, cement, pipe, etc., Wash., D. C.	5- 5
5-23*	Canal, etc., Porto Rico	5-12
5-23	Drain, Rockwell City, Iowa	5-19
5-23	Fire hose, New York, N. Y.	5-19
5-23	Dredging, Ottawa, Ont.	5-19
5-23	Railway supplies, Panama	5-19
5-23	Garbage reduction (Garbage), Bridgeport, Conn.	5-19
5-23	Carts (Garbage), New York	5-19
5-24	Dredging, Wilmington, Del.	4-28
5-24	Barge canal, Albany, N. Y.	4-28
5-25	Crematory (garbage), Columbus Barracks, Ohio	5- 5
5-25	Rock, New Orleans, La.	5-12
5-25	R. R. track scale, N. Chicago, Ill.	5-12
5-26	Wharf, Shediac, N. B.	5-19
5-26	Seats, New York	5-19
5-26	Repairing arch, New York	5-19
5-26	Road oil, New York	5-19
5-27	Concrete wall, Rahway, N. J.	5-19
5-28	Drainage, etc., Pelee Island, Ont.	5-19
5-30	Elec. Ry. grading, Altoona, Pa.	5-12
5-31	Waste refuse (garbage), Cleveland Ohio	5-12
5-31*	Garbage plant (Garbage), Vancouver, B. C.	4-21
5-31	Cement, New York	5-19
5-31	Steel steamer, Ottawa, Ont.	5-19
6- 1	Supplies, Panana	5-19
6- 2	Levee, Jacksonville, Ill.	5-19
6- 3	Pier, Colchester, Ont.	5-19
6- 3	Pier work, Pentwater, Mich.	5-12
6- 4	Steel tanks, Wash., D. C.	5- 5
6- 6	Anchors, Fort Totten, N. Y.	5- 5
6- 6	Riprap, Plymouth, Mass.	5-19
6- 8	Testing materials, Cleveland, O.	5-19
6- 9	Ditch, Council Bluffs, Iowa	5- 5
6-14*	Riprap, Wilmington, N. C.	5-19
6-15*	Foundations, pier extensions, Wheeling, W. Va.	5-19
6-15*	Drainage canals, Tallahassee, Fla.	5- 5
6-15*	Lock gates, Panama	4-21
6-15	Drain, Clarion, Iowa	5-12
6-17*	Dredging equipment, Philadelphia, Pa.	4-28
6-27*	Ladder dredge, Panama	5- 5
7-25*	Dams and canal, Porto Rico	5-12

Examinations.

5-28	Highway Inspector, Albany, N. Y.	5-12
5-28	Junior Assistant, Albany, N. Y.	5-12
5-28	Axeman, Albany, N. Y.	5-12
6- 1	Bacteriological Chemist, Philadelphia, Pa.	5- 5
6- 1	Wireless Engr., Philippines	5- 5
6- 1	Wireless Telegraph Operator, Philippines	5- 5
6- 8	Inorganic Chemist, Philippines	5-12
6- 8	Bacteriologist and Pathologist, Philippines	5-12
6-15	Surveyor, Philippines	5-12
6-15	Geologist, Washington, D. C.	5-19
7-13	Examiner, Klamath Falls, Ore.	5-12

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file (for reference only unless otherwise noted) at the office of The Engineering News Publishing Co., 220 Broadway, New York.

5-21	Rebuilding, Portsmouth, N. H. (S.)	4-14
5-21	Power plant, Washington, D. C., (S.)	4-21
6- 4	Steel tanks, Washington, D. C. (S.)	5- 5
6- 4	Heating systems, etc., Boston, Mass. (S)	5-12
6-11	Substation, Charleston, S. C. (S.)	5-12
6-11	Nurses' quarters, New York (S.)	5-12
6-15*	Drainage canals, Tallahassee, Fla. (P. & S.)	5- 5
6-28*	Bridge, Winnipeg, Man. (P. & S.)	5- 5

TRADE PUBLICATIONS.

(Continued from 215.)

ENGINEERING CONSTRUCTION.—Westinghouse, Church, Kerr & Co., New York. Paper; 6 × 9 ins.; pp. 82; illustrated.

In the fourth issue of this publication this concern attractively sets forth some of its work in railway shops, power stations, manufacturing plants, electric railways, etc. These operations were conducted at various parts of the country and show a wide range of activity.

STEAM TURBINES.—B. F. Sturtevant Co., Hyde Park, Mass. Bulletin 176. Paper; 6½ × 9 ins.; pp. 16; illustrated.

This bulletin describes quite in a general way the operation and design of the already familiar Sturtevant turbine of the Stumpf type. In addition to illustrations of the mechanical construction, there are tables of dimensions for turbines, driving blowers, exhausters and small generators.

WATER-SUPPLY PUMPS.—Fort Wayne Engineering & Manufacturing Co., Fort Wayne, Ind. Paper; 3½ × 6 ins.; pp. 16.

A line of small, motor-driven, reciprocating pumps for individual water-supply systems is shown in this little catalog. The differents parts of the pump are described, with directions for installing and using. At the end of the catalog are appended general dimension, weight and price data.

POWER-TRANSMISSION MACHINERY.—Jones & Laughlin, Pittsburg, Pa. Cloth; 5 × 7 ins.; pp. 270; illustrated.

The 1910 issue of this company's catalog of power-transmission machinery shows reports of tests on steel shafting, with prices and dimensions of the same. All sorts of flange, clutch and compression couplings, shaft collars, brackets, shaft hangers, pillow blocks, step bearings, pulleys, balance wheels, sheaves, belt tighteners, etc., are shown, with prices, dimensions, etc. The catalog is substantially and attractively bound.

TURBINE PUMPS.—Henry R. Worthington, 115 Broadway, New York. Bulletins W. 175 and W. 176. Paper; 6 × 9 ins.; pp. 32 and 12; illustrated.

The first bulletin describes the Worthington turbine pumps for high-head service, and the second bulletin describes centrifugal pumps for low-head service. In these bulletins are found a description of the principles of operation, details of construction, characteristics of operation and illustrations of their application and service. At the end of each bulletin are tables of capacities, dimensions, etc.

DUST-BLOWING MACHINERY.—B. F. Sturtevant Co., Hyde Park, Mass. Bulletin 173. Paper; 6½ × 9 ins.; pp. 4; illustrated.

In this leaflet is a little general information concerning a motor-driven blower intended for blowing dust and dirt from around boards, shelves, machinery, etc., where it is difficult to remove dust and dirt otherwise. The device is portable, and weighs only 55 lbs. The set is intended to furnish a large volume of air at a comparatively low pressure. The connections may be reversed and used as a vacuum cleaner.

BITUMINOUS GAS PRODUCERS.—The Gibbs Gas Engine Co., Atlanta, Ga. Bulletin C. Paper; 8½ × 11 ins.; pp. 4.

In these few pages the "Akerlund soft-coal producer" is briefly set before the public. It is a suction, down-draft type, with a simple cylindrical lining of standard firebrick. The shell rests on three supports carried on wrought-iron foundation piers, the lower part of the shell being immersed in a water pan through which ash is removed. In the lower section of the shell are several poke holes. To the upper edge of the shell is riveted an angle iron, to which is bolted the top plate provided with charging doors, poke holes and induction pipes.

PRINTING PRESSES.—R. Hoe & Co., New York and London. Paper; 6 × 9 ins.; pp. 32; illustrated.

This pamphlet describes some of the rotary, electrotype, web, perfecting presses installed by this company for high class printing of illustrated periodicals, magazines, catalogs, etc. As an example of what can be done with these presses, it is merely necessary to call attention to a single instance—that of one press equipped with cover and insert feeding and wire-stapling devices. This is a single roll machine, with two pairs of cylinders, four pages wide and four pages around. Fine covers and colored insets, printed or lithographed in advance on highly calendared special paper, can be fed in automatically, associated with the regular product from this press, and the whole delivered, folded to page size, cut and bound, ready trimmed.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56, of Advertisements and Construction News page 216.

SCHOOL.

Bayonne, N. J.

Sealed proposals for fireproof school building will be received by the Board of Education, of the City of Bayonne, at the office of the Board of Education, Avenue C and 26th Street, Bayonne, N. J., on

THURSDAY, JUNE 9TH, 1910,
AT 8.30 O'CLOCK P. M.,

for all labor and material necessary for the construction of Public School Building No. 11, between West 23d and West 24th Streets, in the City of Bayonne, N. J., and in accordance with the plans and specifications for the same on file in the SECRETARY'S OFFICE, Avenue C and 26th Street, Bayonne, N. J., and at the office of ROBERT C. HUTCHINSON, ARCHITECT, 126 Liberty Street, N. Y. City, where the form of contracts which will be executed, can be examined and where blank forms of proposals can be obtained.

Proposals will be received for the General Work and materials necessary for the construction and completion of the building herein mentioned, using Reinforced Concrete Construction, in accordance with the plans and specifications for Concrete and fireproof work (excepting the Plumbing, Gas Fitting, Hot Water Heating Plant, Heating and Ventilating) in accordance with the plans and specifications for the same.

No bid or estimate for the General work will be received or considered unless accompanied by a Surety Company Bond for Ten Thousand ($10,000.00) Dollars, binding the bidder to execute the contract in case the same is awarded. Bonds to amount of twenty-five per cent. (25%) of the contract price will be required of the successful bidder for the faithful performance of the General Work.

Proposals must be endorsed "PROPOSALS FOR GENERAL WORK" School No. 11, Bayonne, N. J., and handed to the Secretary of the Board of Education in open meeting when called for in the order of business relating to such proposals.

No proposals will be received after the time called for.

THE BOARD OF EDUCATION RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.

BY ORDER OF THE BOARD.

W. J. TOMLIN,
Secretary.

BRIDGE.

OFFICE OF THE BOARD OF CONTRACT & SUPPLY.

Syracuse, N. Y., May 17th, 1910.

Sealed proposals will be received at the office of the Board of Contract and Supply until 1:30 P. M., Tuesday, May 31st, 1910, for furnishing materials and erecting a steel plate girder bridge over Onondaga Creek at West Brighton Avenue in Syracuse, N. Y., in accordance with the plans and specifications on file in the office of the Board of Contract and Supply. A certified check for 5 per cent. of the total amount of each proposal, payable to the order of Deforest Settle, City Treasurer, to be forfeited, upon failure to enter into contract within five days' notice of award from the Secretary of this Board, must accompany each proposal.

JOHN J. HALLORAN,
Secretary.

Situations Open

WANTED—Two draftsmen at once on [illegible]er-age work near N. Y. Write, stat[illegible] education, experience, date availa[illegible] salary desired. Enclose sample o[illegible] work. Address "W. B. 20," Engineering [illegible] New York. [illegible]1t

WANTED—First class structural sho[illegible] tail draftsmen and checkers immed[illegible] Several months' work. State age, e[illegible] ence and salary expected. BARB[illegible] & ROSS, Washington, D. C. [illegible]

WANTED—Structural and ornamental d[illegible] men. HEDDEN IRON CONST. CO [illegible] Clinton St., Newark, N. J. [illegible]

WANTED—Structural steel designer an[illegible] timator for structural plant in Chi[illegible] Address "N. B. 20," Engineering N[illegible] 1636 Monadnock Block, Chicago. [illegible]

WANTED—Several experienced beam [illegible] column detailers; also two check[illegible] HINKLE IRON CO., 534 West 56th [illegible] New York. [illegible]

STRUCTURAL DRAFTSMEN of ability [illegible] find exceptional opportunity; perma[illegible] positions and liberal salaries by addr[illegible]ing "S. B. 19," Engineering News, N[illegible] York. [illegible]

WANTED.—Foreman, able to conduct half-dozen kinds of work on foundations of buildings, in New York, using handy men only, say twenty-five in four to six groups; many details. First-class pusher and organizer, preferably with some knowledge of machinery. Address "X. B. 20," Engineering News, New York. 20-1t

WANTED.—Two tool designers. Two draftsmen experienced in track work. Apply or write Buda Co., Harvey, Ill. 20-2t

PLAIN LETTERING

By PROF. HENRY S. JACOBY

Most comprehensive book on this subject. Contains standards of U. S. Engineer Corps, U. S. Geological and Geodetic Surveys, and Mississippi River Commission.

Cloth, 10 x 7 inches: 82 pages. Price $3.00.

HIGHWAYS.

NOTICE TO CONTRACTORS.—STATE OF NEW YORK, OFFICE OF THE STATE COMMISSION OF HIGHWAYS, ALBANY, N. Y.—Pursuant to the provisions of Chapter 30 Laws of 1909, sealed proposals will be received by the undersigned at their office, No. 53 Lancaster Street, Albany, N. Y., on Monday, the 6th day of June, 1910, for the repair or resurfacing of the following improved highways:

Repair Cont. No.	Road No.	Name of Road.	Town.
		Albany County	
76	119	Loudon, Sec. 2	Colonie
78	92	Delmar-Slingerlands	Bethlehem
		Cattaraugus County	
65	601	Olean-Allegany	Olean, Allegany
		Cayuga County	
56	383	Owasco	Owasco
67	591	Moravia-Niles	Niles, Moravia
		Chenango County	
68	218	Greene-Smithville Flats	Greene & Smithville
	224	Oxford-McDonough	Oxford, Preston & McDonough
	598	Norwich-Preston	Preston, Norwich
		Cortland County	
55	40	Cuyler	Truxton
		Erie County	
62	272	Orchard Park, Sec. 5	East Hamburg
63	89	Transit, Sec. 2	Amherst, Clarence
64	86	Big Tree	Aurora, Wales
66	88	Transit, Sec. 1	Amherst, Clarence
		Fulton County	
83	33	Gloversville-Mayfield	Johnstown, Mayfield
		Jefferson County	
49	182	Redwood-Alexandria Bay	Alexandria
50	181	Watertown-Sacketts Harbor-Henderson	Hounsfield
		Monroe County	
57	81	Hamlin, Sec. 2	Hamlin
58	79	Scottsville, Sec. 2	Wheatland, Chille
59	78	Clifton, Sec. 1	Chille
60	63	Scottsville, Sec. 1	Chille
61	6	Ridge, Sec. 1	Greece
		Montgomery County	
75	108	West Mohawk River	Amsterdam
85	32	Amsterdam-Minaville, Sec. 1	Florida
		Oneida County	
48	3	Deerfield	Deerfield
	71	Utica-Paris	New Hartford
		Onondaga County	
52	49	Fabius-Apulia, Sec. 1	Fabius
	75	Fabius-Apulia, Sec. 2	Fabius
	121	Fabius-Apulia, Sec. 3	Fabius
53	48	West Lake	Skaneateles
	74	Marcellus-Mariatta	Marcellus
		Ontario County	
51	203	Gorham-Stanley	Gorham
	204	Naples-Atlanta	Naples
	205	Naples-Woodville	Naples, S. Bristol
54	191	Honeoye-Hemlock	Richmond
		Otsego County	
86	314	Gilbertsville-Mt. Upton	Butternuts
		Rensselaer County	
80	77	Albia-Wynantskill	Brunswick, N. Greenbush
84	10	Troy-Brunswick, Sec. 1	Brunswick
	25	Troy-Brunswick, Sec. 2	Brunswick
		Saratoga County	
79	58	Glens Falls-Saratoga, Sec. 1	Moreau
81	59	Waterford, Sec. 2	Half Moon
82	39	Waterford, Sec. 1	Waterford
		Ulster County	
72	37	Saugerties-Woodstock, Sec. 1	Woodstock
	38	Saugerties-Woodstock, Sec. 2	Saugerties
73	116	Kingston-Rifton	Ulster, Esopus
		Warren County	
77	692	Loon Lake-Pottersville-Taylors	Chester
		Washington County	
74	104	Granville-Troy Stage	Granville
		Westchester County	
69	143	Echo Lake-Pines Bridge	Newcastle Yorktown
	148	Pines Bridge-Yorktown Heights	Yorktown
	149	Yorktown Heights-Put. Co. line	Yorktown, Summers
70	20	White Plains Cross Road	North Castle
	35	White Plains-Armonk	North Castle
	50	Armonk-Mt. Kisco	North Castle, New Castle
71	51	Mt. Kisco-Bedford	Bedford
	144	Bedford-Cross River	Bedford, Poundridge and Lewisboro
	150	Cross River-Turk Hill	Lewisboro

Specifications and estimates may be seen and proposal forms obtained at the office of the Commission and at the offices of the following division engineers: For work in the counties of Ulster and Westchester at the office of Division Engineer Spencer J. Stewart, Columbus Hall, Poughkeepsie, N. Y.; for work in the counties of Albany, Fulton, Montgomery, Rensselaer, Saratoga, Warren and Washington at the office of Division Engineer H. P. Willis, Humane Bldg., Albany, N. Y.; for work in the counties of Jefferson and Oneida at the office of Division Engineer Guy H. Miller, Cleveland Bldg., Watertown, N. Y.; for work in the counties of Cayuga, Chenango, Cortland, Onondaga and Ontario at the office of Division Engineer Fred W. Sarr, So. Clinton and W. Jefferson Sts., Syracuse, N. Y.; for work in the counties of Cattaraugus, Erie and Monroe at the office of Division Engineer M. W. Wilbur, 423 Cutler Bldg., Rochester, N. Y.; for work in the county of Otsego at the office of Division Engineer Paul McLoud, 47 Court St., Binghamton, N. Y.

The especial attention of bidders is called to "Information for Proposers" on pages 6 and 7 of the specifications.

Proposals for each road must be presented in a separate sealed envelope endorsed on the outside with the name and number of the road for which the proposal is made. Each proposal must be accompanied by a New York draft or certified check payable to the order of the State Commission of Highways for an amount equal to at least five per cent of the amount of the proposal which such draft or check accompanies. This draft or check will be held by the Commission until the contract and bond are duly executed

The successful bidder will be required to give a bond for fifty per cent. of the amount of the contract; such bond to be executed by a Surety Company to be approved by the Commission, or a bond secured by the deposit of collateral securities to be approved by the Commission.

The right is reserved to reject any or all bids.

S. PERCY HOOKER,
Chairman.
T. WARREN ALLEN,
ROBERT EARL,
Commissioners.